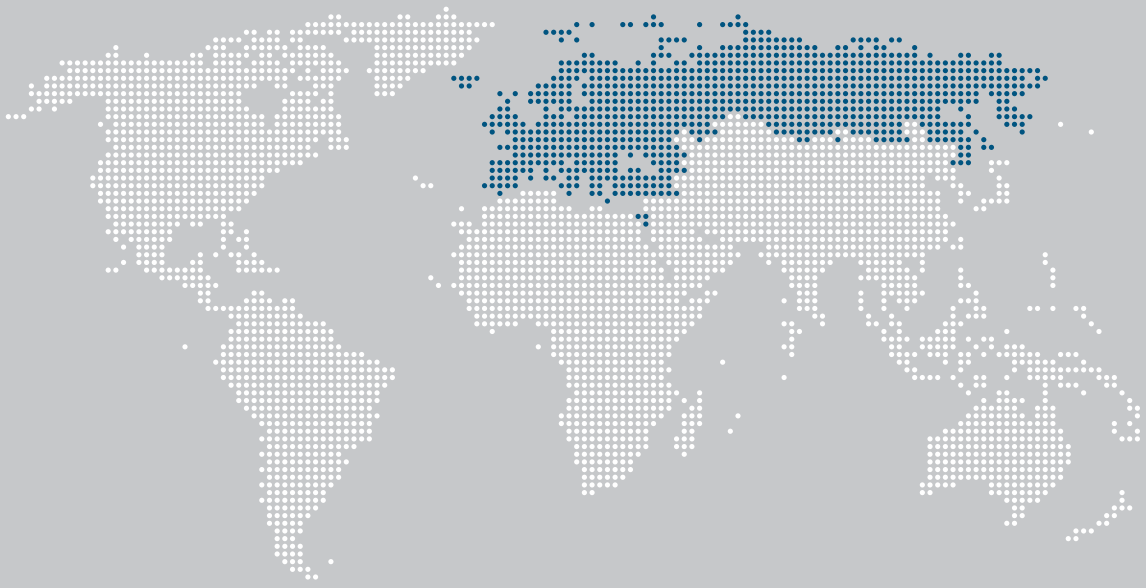
World Economic and Financial Surveys

Regional Economic Outlook

Europe

Navigating Stormy Waters



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ERRATUM

For the original Note 4 in Figure 1.16, which appears on page 12 of the October 2011 *Regional Economic Outlook: Europe*,

[4]The exposures are calculated in percent of the equity of banks that have foreign exposures. Banks that do not have exposures to Greece, Ireland, and Portugal, and Spain are not included in the computation.

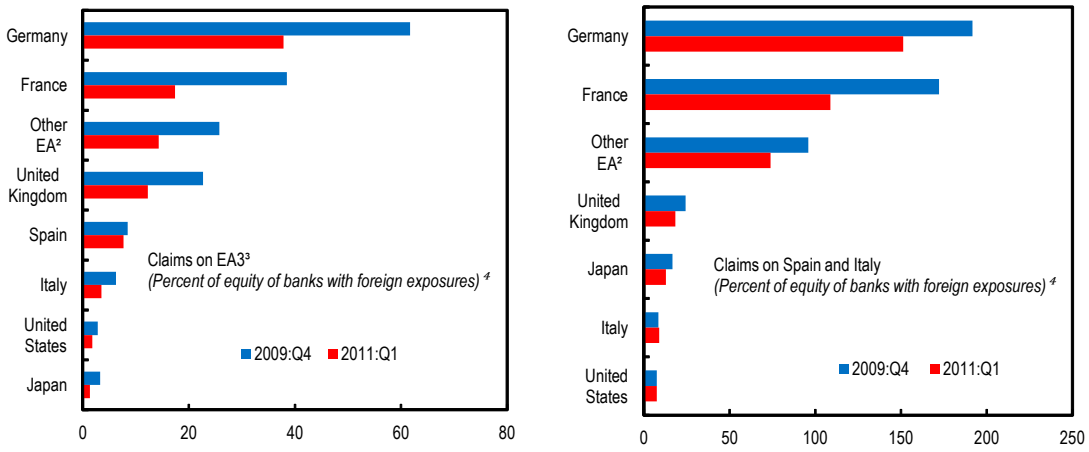
please read instead the following:

[4]The exposures are calculated in percent of the equity of banks that have foreign exposures. Banks that do not have exposures to Greece, Ireland, and Portugal (left panel), and Spain and Italy (right panel), are not included in the computation.

A corrected version of the figure appears below.

Figure 1.16

Selected Advanced Countries: Claims on Domestic Banks and Public Sector, 2009:Q4 and 2011:Q1[1]



Sources: Bank of England; Bankscope; BIS Consolidated Banking Statistics; IMF, *International Financial Statistics;* and IMF staff calculations.

[1]The exposures were adjusted using data from the Bank of Ireland to account for the fact that a significant portion of the claims are claims on foreign banks domiciliated in Ireland.

[2]Other EA countries include Austria, Belgium, Ireland, the Netherlands, and Portugal. 2011:Q1 only for Belgium; for all other countries 2010:Q4 data.

[3]EA3: Greece, Ireland, and Portugal.

[4]The exposures are calculated in percent of the equity of banks that have foreign exposures. Banks that do not have exposures to Greece, Ireland, and Portugal (left panel), and Spain and Italy (right panel), are not included in the computation.

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This *Regional Economic Outlook: Europe—Navigating Stormy Waters* was prepared by a team led by Bas Bakker and Christoph Klingen under the direction of Antonio Borges. The team included Özge Akıncı, Céline Allard, Lone Christiansen, Gregorio Impavido, Phakawa Jeasakul, Yuko Kinoshita, Géraldine Mahieu, and Yan Sun. Specific contributions were made by Florence Jaumotte, Thierry Tressel, and Nico Valckx. Jessie Yang and Xiaobo Shao, Amara Myaing, and Martha Bonilla provided research, administrative, and editorial assistance, respectively. Michael Harrup of the External Relations Department oversaw the production. The report is based on data as of September 7, 2011. The views expressed in the report are those of the IMF staff and should not be attributed to Executive Directors or their national authorities.

Introduction and Overview

Following a barrage of unfavorable shocks in the first half of 2011, global economic activity has weakened and has become more uneven. A devastating earthquake and tsunami in Japan disrupted global manufacturing; the Arab spring drove up oil prices; financial strains in euro area financial and sovereign debt markets deepened; growth in the United States decelerated sharply; and the standoff about raising the ceiling on U.S. government debt sapped confidence in policy making. Against this backdrop, projections for global growth have been revised downward, especially for advanced economies. The September 2011 *World Economic Outlook* projects real GDP growth worldwide at 4.0 percent for 2011and 2012—about ½ percentage point lower than projected in the April 2011 edition.

In Europe, the recovery lost steam in the second quarter, after a surprisingly strong first quarter, with growth in many countries coming to a near standstill. The deceleration was partly the result of global shocks, which affected mostly those countries in Europe that had benefited so far from the strong global recovery. Yet it was also the result of the escalation of the euro area crisis, which is having a more wide-spread effect on domestic demand, as the confidence shock spreads beyond the periphery to core countries' consumers, bankers, and investors.

This edition of the *Regional Economic Outlook* hence projects growth for all of Europe to slow down from 2.4 percent in 2010 to 2.3 percent in 2011, and further to 1.8 percent in 2012 (Table 1). Inflation is likely to decline from 4.2 percent in 2011 to 3.1 percent in 2012, amid remaining economic slack and commodity prices that retreat from their peaks in early 2011.

Real economic activity in advanced Europe is projected to expand by 1.6 percent in 2011 and 1.3 percent in 2012. In the wake of the global crisis in 2008/09, advanced European economies recovered at different speeds. Some economies experienced tepid growth, hindered by high private indebtedness, a burst in asset prices, weak credit owing to banks' funding difficulties and private-sector deleveraging, and lost competitiveness. Meanwhile, many others—such as Germany or Sweden—free from major imbalances, took advantage of their strong initial competitiveness positions to ride the global recovery wave in 2010, barely affected by the turmoil in the euro area periphery. This tiering is now fading, and the most recent indicators point to a general convergence toward low growth. Countries under market pressure will continue to suffer from deeper fiscal austerity measures, sharper private-sector balance sheet deleveraging, and more severe structural unemployment, with Portugal and Greece expected to remain in recession until mid-2012 and early 2013, respectively. In Italy and Spain, higher interest costs on the sovereign debt, front-loaded fiscal adjustment, and increased tensions surrounding banks will constitute additional drags on already soft activity. Meanwhile, weaker global growth momentum will weigh on northern euro area countries, slowing the closing of their output gaps and the improvement of their labor markets. Germany, for instance, will see its growth pace halved from 2.7 percent in 2011 to 1.3 percent in 2012.

Growth in emerging Europe is projected to remain unchanged from last year—at 4.4 percent in 2011—and then to decline to 3.4 percent in 2012, as rebounds run their course and the global slowdown makes itself felt. Growth differentials within emerging Europe, which had been large in 2009 and 2010, are set to diminish. This reflects both a pickup in the Baltic countries and southeastern Europe—regions that had been most severely affected by the global crisis of 2008/09—and a slowdown of domestic demand growth in countries that hitherto expanded the fastest, such as Turkey and the European CIS countries. Nonetheless, significant differences remain in countries' cyclical positions—output gaps in Poland and Turkey are closed or positive, while activity of many other countries has yet to return to precrisis levels.

Table 1

European Countries: Real GDP Growth and CPI Inflation, 2009–12

(Percent)

	Real GDP Growth				Average CPI Inflation			
	2009	2010	2011	2012	2009	2010	2011	2012
Europe[1]	-4.6	2.4	2.3	1.8	2.7	3.0	4.2	3.1
Advanced European economies[1]	-4.1	1.7	1.6	1.3	0.7	1.9	2.8	1.7
Emerging European economies[1]	-6.0	4.4	4.4	3.4	8.5	6.3	7.9	6.8
European Union[1]	-4.2	1.8	1.7	1.4	0.9	2.0	3.0	1.8
Euro area	-4.3	1.8	1.6	1.1	0.3	1.6	2.5	1.5
Austria	-3.9	2.1	3.3	1.6	0.4	1.7	3.2	2.2
Belgium	-2.7	2.1	2.4	1.5	0.0	2.3	3.2	2.0
Cyprus	-1.7	1.0	0.0	1.0	0.2	2.6	4.0	2.4
Estonia	-13.9	3.1	6.5	4.0	-0.1	2.9	5.1	3.5
Finland	-8.2	3.6	3.5	2.2	1.6	1.7	3.1	2.0
France	-2.6	1.4	1.7	1.4	0.1	1.7	2.1	1.4
Germany	-5.1	3.6	2.7	1.3	0.2	1.2	2.2	1.3
Greece	-2.3	-4.4	-5.0	-2.0	1.3	4.7	2.9	1.0
Ireland	-7.0	-0.4	0.4	1.5	-1.7	-1.6	1.1	0.6
Italy	-5.2	1.3	0.6	0.3	0.8	1.6	2.6	1.6
Luxembourg	-3.6	3.5	3.6	2.7	0.4	2.3	3.6	1.4
Malta	-3.3	3.1	2.4	2.2	1.8	2.0	2.6	2.3
Netherlands	-3.5	1.6	1.6	1.3	1.0	0.9	2.5	2.0
Portugal	-2.5	1.3	-2.2	-1.8	-0.9	1.4	3.4	2.1
Slovak Republic	-4.8	4.0	3.3	3.3	0.9	0.7	3.6	1.8
Slovenia	-8.1	1.2	1.9	2.0	0.9	1.8	1.8	2.1
Spain	-3.7	-0.1	0.8	1.1	-0.2	2.0	2.9	1.5
Other EU advanced economies								
Czech Republic	-4.1	2.3	2.0	1.8	1.0	1.5	1.8	2.0
Denmark	-5.2	1.7	1.5	1.5	1.3	2.3	3.2	2.4
Sweden	-5.3	5.7	4.4	3.8	2.0	1.9	3.0	2.5
United Kingdom	-4.9	1.4	1.1	1.6	2.1	3.3	4.5	2.4
EU emerging economies								
Bulgaria	-5.5	0.2	2.5	3.0	2.5	3.0	3.8	2.9
Hungary	-6.7	1.2	1.8	1.7	4.2	4.9	3.7	3.0
Latvia	-18.0	-0.3	4.0	3.0	3.3	-1.2	4.2	2.3
Lithuania	-14.7	1.3	6.0	3.4	4.2	1.2	4.2	2.6
Poland	1.6	3.8	3.8	3.0	3.5	2.6	4.0	2.8
Romania	-7.1	-1.3	1.5	3.5	5.6	6.1	6.4	4.3
Non-EU advanced economies								
Iceland	-6.9	-3.5	2.5	2.5	12.0	5.4	4.2	4.5
Israel	0.8	4.8	4.8	3.6	3.3	2.7	3.4	1.6
Norway	-1.7	0.3	1.7	2.5	2.2	2.4	1.7	2.2
Switzerland	-1.9	2.7	2.1	1.4	-0.5	0.7	0.7	0.9
Other emerging economies								
Albania	3.3	3.5	2.5	3.5	2.2	3.6	3.9	3.5
Belarus	0.2	7.6	5.0	1.2	13.0	7.7	41.0	35.5
Bosnia and Herzegovina	-2.9	0.7	2.2	3.0	-0.4	2.1	4.0	2.5
Croatia	-6.0	-1.2	0.8	1.8	2.4	1.0	3.2	2.4
Macedonia	-0.9	1.8	3.0	3.7	-0.8	1.5	4.4	2.0
Moldova	-6.0	6.9	7.0	4.5	0.0	7.4	7.9	7.8
Montenegro	-5.7	1.1	2.0	3.5	3.4	0.5	3.1	2.0
Russia	-7.8	4.0	4.3	4.1	11.7	6.9	8.9	7.3
Serbia	-3.5	1.0	2.0	3.0	8.1	6.2	11.3	4.3
Turkey	-4.8	8.9	6.6	2.2	6.3	8.6	6.0	6.9
Ukraine	-14.8	4.2	4.7	4.8	15.9	9.4	9.3	9.1
Memorandum								
World	-0.7	5.1	4.0	4.0	2.5	3.7	5.0	3.7
Advanced economies	-3.7	3.1	1.6	1.9	0.1	1.6	2.6	1.4
Emerging and developing economies	2.8	7.3	6.4	6.1	5.2	6.1	7.5	5.9
United States	-3.5	3.0	1.5	1.8	-0.3	1.6	3.0	1.2
Japan	-6.3	4.0	-0.5	2.3	-1.4	-0.7	-0.4	-0.5
China	9.2	10.3	9.5	9.0	-0.7	3.3	5.5	3.3

Source: IMF, *World Economic Outlook*.

[1] Average weighted by GDP valued at purchasing power parity.

Given persistent tensions in euro area sovereign markets and global weaknesses, downside risks remain particularly acute. Renewed concerns about policy slippages in program countries or lack of commitment to continued support of program countries at the euro area level could amplify the shockwaves seen during the 2011 summer throughout the euro area with adverse repercussions regionally and globally. Although substantial amounts of capital were raised ahead of this summer's stress tests, capital buffers remain low in a significant number of euro area financial institutions, which reduces their ability to cope with shocks. Funding could dry up, jeopardizing the functioning of the financial system, at a time when banks and sovereigns are facing major rollover requirements. Compounding the intra-euro area stresses, a further setback in global growth would also generate negative spillovers.

With growth momentum waning and financial tensions rising, policy adjustments are called for. The withdrawal of monetary support, or monetary tightening in the cyclically more advanced economies, will need to be paused or even reversed in cases where downside risks to inflation and growth persist. While the deteriorated state of public finances, and renewed market concerns over sovereign debt, leave no option but to strengthen fiscal positions, the slowdown in growth is calling for caution. Where pressures are most severe, the consolidation should continue to be front-loaded—intensifying market pressures is hardly an option. In other countries, where medium-term fiscal consolidation plans are credible or have been front-loaded, there may be room to allow automatic stabilizers to work fully to deal with growth surprises.

Crisis management in the euro area needs to go beyond its current approach to secure success. Euro area leaders need to spell out and recommit to a common vision of how the euro area is expected to function in the future. This is essential to anchor market expectations and dispel the prevailing uncertainty. Overall, a definite strengthening of fiscal and economic governance of the monetary union is needed. While strengthening national budgetary rules, countries will need to cede some control over their fiscal position to a central euro area body. Increased ex-ante fiscal risk sharing is likely to be necessary together with a common approach and backstop to the financial system of the euro area.

A number of actions to deal with the crisis should be undertaken urgently. Implementation of the July 21 EU summit decisions should be accelerated. More comprehensive actions toward restructuring and front-loaded strengthening of banks' capital buffers are also needed, as uncertainties surrounding bank balance sheets continue to rattle investors. Ideally, capital should be raised through private solutions including cross-border consolidations. In the absence of these measures, supervisors will have to make the case either for injecting public funds into weak banks—which will be difficult in an environment of fiscal consolidation—or closing them down. Ending the intertwining of sovereign and bank balance sheets stresses ultimately requires a European Resolution Authority, backed by a common deposit guarantee and resolution fund.

An escalation of the strains in euro area debt markets also poses risks for emerging Europe, considering its tight economic and financial linkages with advanced Europe together with fragilities stemming from the 2008/09 crisis. Policy makers will need to make headway with repairing public finances, including through strengthening fiscal frameworks to underwrite lasting fiscal discipline. Addressing high ratios of non-performing bank loans is another priority to improve conditions for new lending and reduce economic drag from overextended borrowers more generally.

Raising growth rates in slow growing countries would help address many of Europe's pressing problems, not least lingering concerns about the longer-term sustainability of public finances. In the past decade, growth rates in GDP per capita have differed markedly among European countries, from zero in Italy and Portugal to more than 4 percent in the best performers. To a large extent, growth differentials reflect convergence. However,

a number of countries have grown less than their potential because of poor macroeconomic policies and barriers to growth. Heavily regulated goods and labor markets and inadequate institutions and macroeconomic policies have kept some countries less flexible, less competitive, and less integrated into the global economy than their better-performing peers, and this explains much of their inferior growth performance. Escaping low-growth traps is not easy, but the experience of the Netherlands and Sweden in the 1980s and 1990s demonstrates that it can be done. Reforms should be comprehensive, addressing both macroeconomic imbalances and structural problems, not only because both matter but also because reforms can be mutually reinforcing. Implementing reforms takes time and the rewards become visible only with some delay, but the long-term impact can be substantial.

The successful integration of emerging Europe has led to increasing spillovers between advanced and emerging Europe. Emerging Europe is now one of the most dynamic markets for advanced Europe's exports; production chains have become highly integrated across borders; and western European banks have come to dominate emerging Europe's banking systems. The growing interaction has benefited both regions, but it has also meant that shocks in one region increasingly affect the other, with spillovers progressively traveling both ways. Financial and trade spillovers interact, as shocks to financial flows from west to east are soon felt in trade flows. Spillovers may complicate economic policy making, but such challenges should not detract from the fundamental benefits of economic and financial integration.

The remainder of this edition of the *Regional Economic Outlook* discusses in more detail the outlook and policy priorities for advanced Europe in Chapter 1 and for emerging Europe in Chapter 2. Growth differentials in Europe are analyzed in Chapter 3, and linkages between advanced and emerging Europe are discussed in Chapter 4. The Appendix lists current IMF arrangements with European countries.

1. Advanced Europe: Reversing the Slide

The euro area crisis has entered into a new stage in the context of a marked global slowdown. Tensions have moved from the euro area periphery to some core economies, prompting new policy interventions, but a definite solution remains elusive. As a result, confidence has eroded more widely and downside risks have intensified again throughout the advanced economies of Europe. Both conventional and unconventional policy stances will need to be adapted to reflect the weakening and tense outlook and a durable resolution to the euro area's sovereign debt problems needs to be found. Fiscal and monetary policies will have to be as supportive as possible within credible medium-term frameworks; financial systems need to be strengthened further; and a consistent, cohesive, and cooperative approach to monetary union needs to be adopted by all euro area stakeholders.

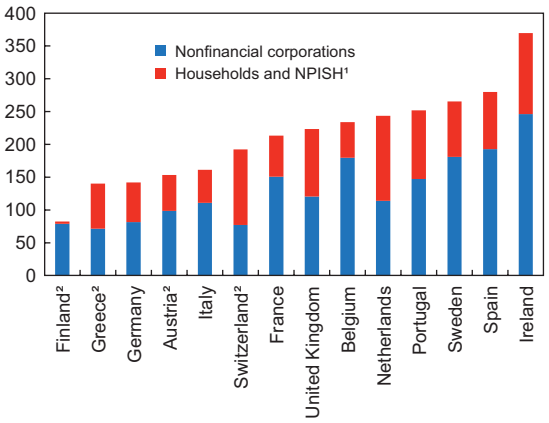
Divergent Recoveries, but a Synchronized Slowdown?

Idiosyncratic vulnerabilities mattered a great deal…

In the wake of the global financial crisis, advanced European economies have recovered at very different speeds. Some experienced tepid growth, hindered by high private indebtedness (Figure 1.1), a burst in asset prices, weak credit owing to banks' funding difficulties and private-sector deleveraging, and lost competitiveness. Meanwhile, many others—such as Germany and Sweden—free from major imbalances, took advantage of their strong initial competitiveness positions to ride the global recovery wave in 2010, barely affected by the turmoil in the euro area periphery (Figure 1.2) (Jaumotte and others, forthcoming).

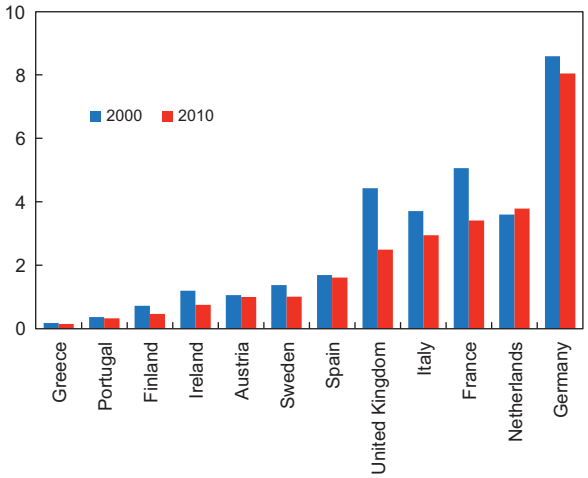
This tiering is now fading. Sweden, Switzerland, and many northern euro area countries, powered by Germany, continued cruising in the first quarter, with investment particularly buoyant (Figure 1.3). By contrast, Spain, Italy, and the United Kingdom registered lackluster performance, as they struggled, respectively, with high unemployment, weak structural fundamentals and meager real income prospects. The three program countries (Greece, Ireland, and Portugal) either remained mired in or

Figure 1.1
Selected Advanced European Countries: Sectoral Debt Levels, 2010
(Percent of GDP)



Sources: Eurostat; Haver Analytics; and IMF staff calculations.
[1]NPISH: Nonprofit institutions serving households.
[2]Based on 2010:Q3–Austria, Greece, France (households); 2009–Finland (households); 2011:Q1–Belgium, Netherlands, and Sweden; 2008–Switzerland.

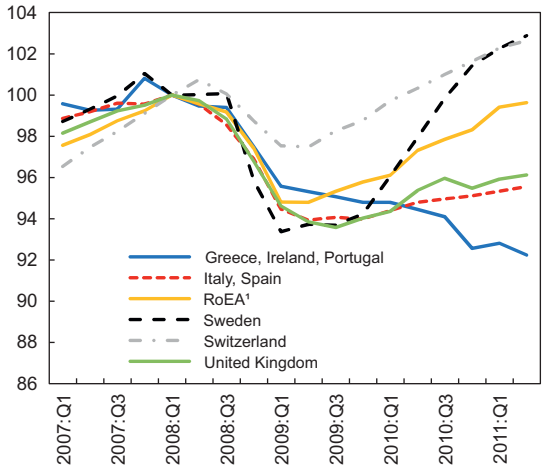
Figure 1.2
Selected Advanced European Countries: Export Market Share, 2000 and 2010[1]
(Percent)



Source: IMF, *Direction of Trade*.
[1]For each country, exports of goods to the rest of the world as a share of total world exports.

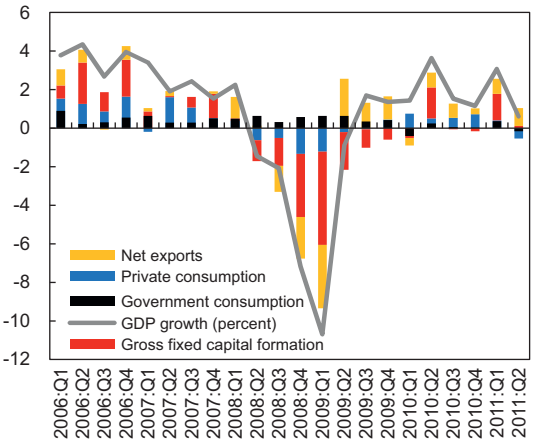
Note: The main author of this chapter is Céline Allard.

Figure 1.3
Selected Advanced European Countries: Real GDP, 2007:Q1–2011:Q2
(2008:Q1 = 100)



Source: IMF, *World Economic Outlook*.
¹Rest of euro area: excludes Greece, Ireland, Italy, Portugal, and Spain.

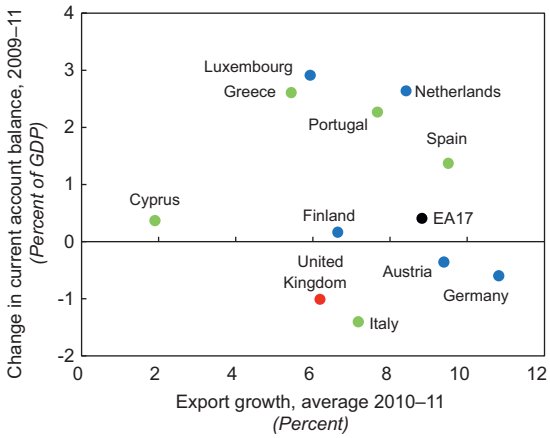
Figure 1.4
Euro Area: Contributions to GDP Growth, 2006:Q1–2011:Q2
(Quarter-over-quarter annualized growth rate, percentage points; seasonally adjusted)



Sources: Eurostat; and IMF staff calculations.
Note: Contributions from inventories and statistical discrepancy not shown.

were barely exiting from recession on the back of large front-loaded fiscal adjustments. The most recent indicators, however, point to a general convergence toward low growth, as evidenced by the acute loss in momentum in the second quarter, even after taking into account some exceptional factors that dampened growth (Figure 1.4). The deceleration

Figure 1.5
Euro Area Countries and United Kingdom: External Imbalances, 2009–11



Source: IMF, *World Economic Outlook*.
Note: Green dots: large deficit countries with 2010 deficit above 2.5 percent of GDP; blue dots: large surplus countries with 2010 surplus above 2.5 percent of GDP; black dot: EA17; and red dot: United Kingdom.

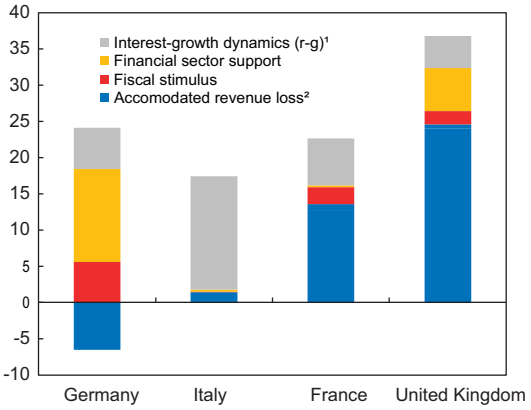
of activity at the global level, combined with lagged effects of higher commodity prices and the supply disruptions that followed the Japanese earthquake, have affected mostly those countries that had benefitted so far from the strong global recovery. Yet the escalation of the euro area crisis is having a more wide-spread effect on domestic demand, as the confidence shock has spread beyond the periphery to core countries' consumers, bankers and investors.

One consequence has been that external imbalances, especially within the euro area, have declined, although questions remain about the sustainability of that trend. Apart from Italy, all euro area countries that had a negative external balance exceeding 2½ percent of GDP in 2010 have seen their current-account deficit decline since the crisis; yet, with the exception of Spain, this correction has not come as a result of particularly buoyant exports, but mainly as a result of cyclically weak domestic demand (Figure 1.5). As further elaborated in the September 2011 *World Economic Outlook* (IMF, 2011g), the significant efforts currently under way to strengthen public finances in the peripheral countries will also contribute to reducing external imbalances, but given the absence of the nominal exchange rate tool, the adjustment is likely to be protracted.

Figure 1.6

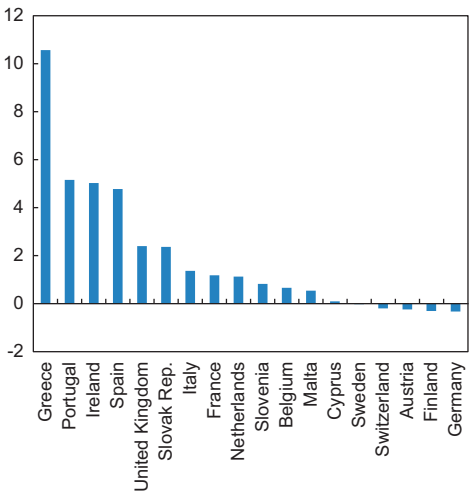
Selected European Countries: Drivers of Public Debt Increase, 2007–2011

(Percent of GDP)



Selected European Countries: Change in Structural Fiscal Balance, 2011 vs. 2009

(Percent of GDP)



Sources: IMF, *Fiscal Monitor*; and IMF, *World Economic Outlook*.

¹Contribution of the interest expenditure (in percent of GDP) adjusted for growth (see Appendix 1, IMF, 2010a).

²Revenue loss associated with output losses from the financial crisis. This is computed as a residual. If the sum of identified drivers of debt is larger than the overall increase in debt, revenue losses from lower output were minimal and/or compensated for by fiscal measures (see Box 1, IMF, 2010c).

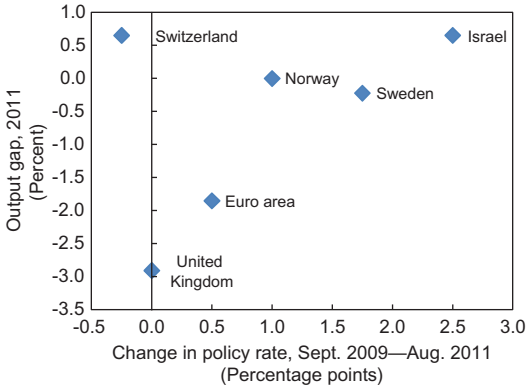
…as did differentiated policy responses

Different policy mixes

Countries adopted very different policy mixes, both inside and outside the euro area. In the wake of the crisis, the general poor state of public finances in advanced Europe became apparent, as bank recapitalization programs, recession-related revenue losses and fiscal stimulus packages boosted public debt by up to 15–20 percentage points of GDP in the largest euro area countries and by as much as 40 percentage points of GDP in the United Kingdom (Figure 1.6). Countries with relatively better starting positions pursued fiscal consolidation strategies spread over several years, to minimize the short-term contractionary effect on activity. In contrast, countries under severe market pressures, including the three program countries, but also Spain and more recently Italy, had no choice but to front-load their efforts to avoid confidence from spiraling downward. The United Kingdom, faced with serious fiscal risks, deliberately chose to tighten its fiscal stance early on—an approach that has been successful at buttressing market sentiment but has created headwinds for near-term growth.

Figure 1.7

Euro Area and Selected Countries: Monetary Policy Stance, 2009–11



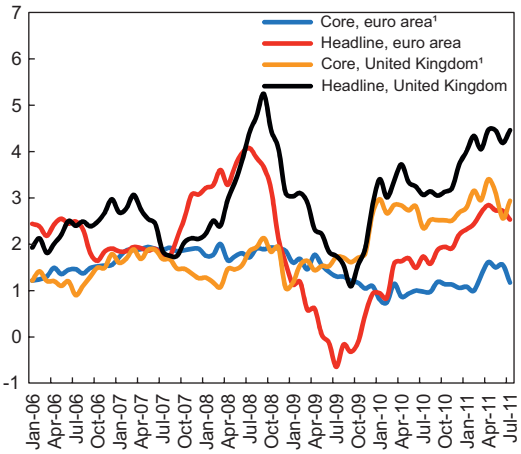
Sources: Haver Analytics; and IMF, *World Economic Outlook*.

Accordingly, the monetary stance varied too (Figure 1.7). Countries most advanced in the recovery cycle (Israel, Norway, and Sweden) clearly had to withdraw monetary support, while Switzerland kept its accommodative stance, as safe-haven behaviors triggered a strong

Figure 1.8

Euro Area and United Kingdom: Headline and Core Inflation, January 2006–July 2011

(Percent; year-over-year change)

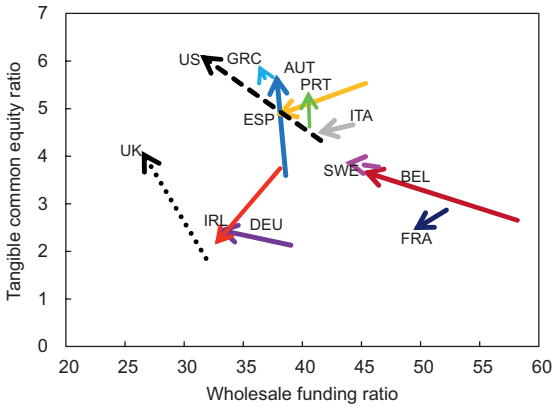


Sources: Eurostat; Haver Analytics; national authorities; and IMF staff calculations.

[1]Harmonized index of consumer price inflation (excluding energy, food, alcohol, and tobacco).

Figure 1.9

Selected European Countries: Tangible Common Equity and Wholesale Funding Ratio, 2007–10



Sources: Bloomberg, L.P.; and IMF staff calculations.

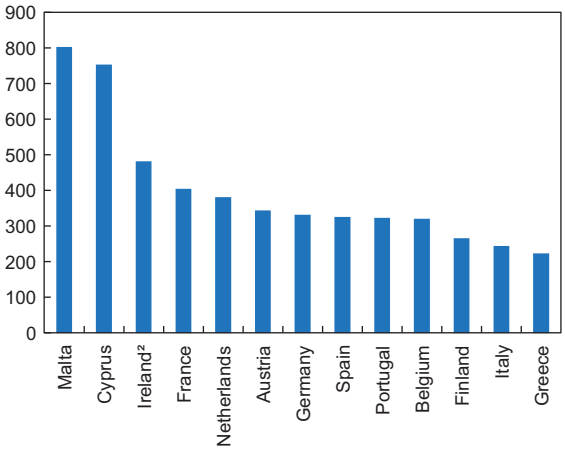
appreciation of the Swiss franc, with a dampening effect on prices. The European Central Bank (ECB) increased its interest rates by 50 basis points between April 2011 and July 2011, reflecting rising headline inflation following the rally in commodity prices and the prospect of a steadily closing output gap (Figure 1.8). By contrast, the Bank of England kept the scale of monetary stimulus unchanged, on account of the strong fiscal consolidation, greater slack in the economy (which has kept wage growth subdued) and an inflation overshoot that is largely seen as driven by temporary factors, including indirect tax increases.

Uneven approaches to financial system reform

Progress toward putting banks on a sounder footing has been uneven. Having been among the institutions most heavily reliant on wholesale funding before the crisis, euro area banks have also been slower than their Anglo-Saxon counterparts to reduce this reliance since then (Figure 1.9). While substantial efforts were made to raise capital ahead of this summer's stress tests, buffers remain thin in a significant number of financial institutions. In addition, large exposures to the sovereign debt of program countries and continuous low profitability—on the back of rising non-performing loans in some countries—call into question their ability to rely on retained earnings to build capital buffers in the future. By contrast, with core tier 1 ratios above 10 percent, major U.K. banks are taking a proactive approach in their transition to Basel III rules. Similarly, Swedish banks have raised capital to well above the minimum regulatory requirements and their loan losses in the Baltic countries—their main foreign exposure—have fallen.

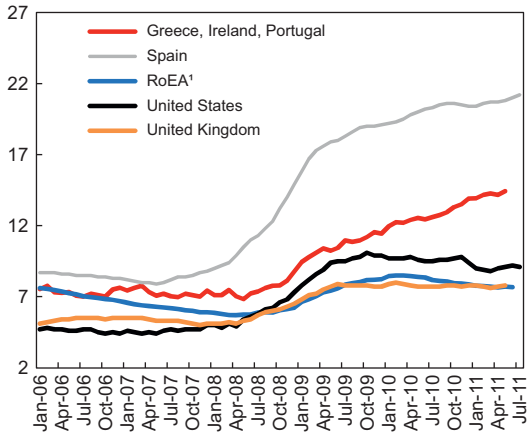
Regulatory approaches to tackling banking sectors that still remain large (Figure 1.10) have also differed. Having suffered severely from the crisis through financial channels, regulators in the United Kingdom, Sweden, and Switzerland have all expressed their preference for going further than the Basel III minimum requirements to reinforce capital as a way to strengthen their banking system and reduce associated fiscal risks. Similarly, in Ireland, in the context of the adjustment program, institutions are unwinding noncore assets while nonviable banks are being resolved—ultimately leading to a much leaner banking sector. Meanwhile, other euro area regulators are pushing to soften somewhat the capital quality standards and see no need to go beyond Basel III.

Figure 1.10
Selected European Countries: Financial Sector Assets Relative to Size of Economy, 2010[1]
(Percent of GDP)



Source: European Central Bank.
[1]Excluding the Eurosystem.
[2]International financial service centers are excluded because they do not actively provide credits to the domestic economy.

Figure 1.11
Selected European Countries and the United States: Unemployment Rate, January 2006–July 2011
(Percent)



Sources: Eurostat; Haver Analytics; and IMF staff calculations.
[1]Rest of euro area: excludes Greece, Ireland, Portugal, and Spain.

Insufficient structural reforms

Countries that suffered the most from the global crisis as the result of past imbalances have also been most prone to embark on needed structural reforms. As the sharp decline in the nontradable sector led to dramatic increases in unemployment rates in a number of countries, authorities were confronted with long preexisting weaknesses in their labor market, which the boom years had somehow masked (Figure 1.11). Greece, Portugal, and Spain have started overhauling their dismissal and employment protection regulations as well as their wage bargaining systems to tackle dual labor markets and facilitate job reallocation. Meanwhile, countries that had done so prior to the crisis, such as Germany through the mid-2000 Hartz reforms, reaped the benefits in the form of fewer job losses during the recession, and are already enjoying unemployment rates lower than their pre-crisis levels.

Where recoveries have been stronger, however, there has also been less urgency to tackle impediments to growth, despite the risk that higher unemployment inherited from the crisis could become entrenched. In many countries, labor utilization remains excessively low (Allard and Everaert, 2010). Disincentives to take a job (for instance, in France) and entry barriers in some services (for example, in Germany and Italy) are still holding growth and employment back, although here again countries under adjustment programs are starting to address these issues. In addition, uneven positions on the structural map are also at the root of some of the persistent inflation differentials within the euro area, with detrimental consequences for the efficiency of the common monetary policy (Box 1.1).

These divergent paths threaten to reverse past successes at cross-border integration, especially within the euro area, with banks and policymakers alike turning more inward. Capital markets are being segmented, with the periphery relying on ECB and official financing. Cross-border banking mergers and acquisitions within the euro area, which were already lackluster, have further diminished in the wake of the crisis—although preliminary signs suggest a modest revival (Figure 1.12). And needed progress on euro area crisis management and burden sharing arrangement has

Box 1.1

Labor Reforms in the Euro Area: Still Too Little?[1]

Efficient labor market institutions and policies are key to raise employment growth and reduce inequities. Employment rates are higher and unemployment lower in economies with lower labor taxes, moderate unemployment benefits, and collective bargaining systems that are more favorable to employment than wage increases (typically full coordination or full decentralization as opposed to intermediate coordination of collective bargaining) (Bassanini and Duval, 2006; Annett, 2007). Lower employment protection legislation (EPL) facilitates entry into the labor market of groups that tend to be marginalized in dual markets, such as women and youth, and reduces the incentives to resort to flexible but precarious temporary contracts (Jaumotte, 2011). It also increases labor productivity by fostering reallocation to the most productive sectors. Pension reforms that increase the legal retirement age, curb early retirement schemes, and reduce the implicit tax on continued work at old-age can boost the employment of older workers.

Adequate institutions are even more essential to the good functioning of the euro area. In the pre-crisis period, wage indexation practices, high employment protection and to some extent intermediate structures of collective bargaining contributed substantially to large and persistent intra-euro inflation differentials, the deterioration in competitiveness and the emergence of imbalances in many peripheral countries (Jaumotte and Morsy, forthcoming). Indeed, these institutions give workers more market power to negotiate wage increases to compensate for high inflation and therefore tend to increase inflation persistence.[2] This feature is harmful in a monetary union, where the individual real effective exchange rate can be adjusted only through relative price changes (Jaumotte and others, forthcoming).

Labor market institutions and policies still have room to improve substantially in advanced Europe, with different priorities across countries (Allard and Everaert, 2010). Lower labor utilization in the euro area accounts for a GDP per capita differential with the United States of about 15 percentage points.[3] Although this may in part reflect different preferences for labor and leisure, cross-country indicators of labor market institutions point to less efficient set-ups in euro area countries, relative not only to the US but also to the OECD average. The largest sources of inefficiencies differ across countries, with a (not fully clear-cut) divide between northern and southern euro area countries (see figure). In southern euro area countries, the intermediate coordination of collective bargaining (Greece, Portugal, and Spain) and high EPL (Greece, Portugal, and Spain before recent reforms) constitute the main impediments. But these features are not unique to the southern euro area, as France also has an intermediate collective bargaining system and high EPL. In northern euro area countries, labor tax wedges are particularly high (France and Germany, but also Greece and Italy) and unemployment benefits generous (Germany and Ireland). Disincentives to labor market participation of older workers are a problem in most countries.

Crisis countries have been under more pressure to reform their labor markets for various reasons. First, with the Great Recession and the euro area sovereign debt crisis, their unemployment rates have increased drastically,

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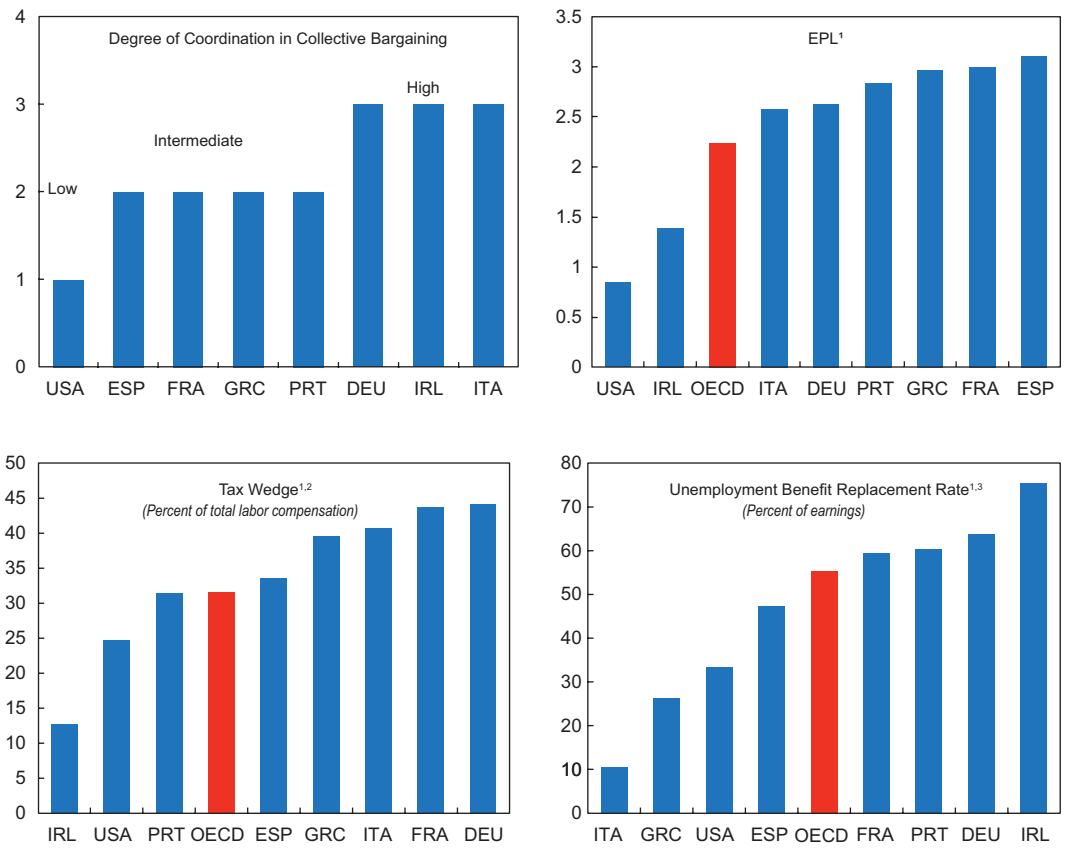
Note: The main author of this box is Florence Jaumotte.

[1] The box focuses on the four large euro area countries (France, Germany, Italy, and Spain) and the three program countries (Greece, Ireland, and Portugal). But many of the issues specific to Germany and France also apply to other northern euro area countries.

[2] The relationship with the coordination in bargaining is non-linear, in the sense that both low and high coordination would lead to less inflation persistence than intermediate coordination. In the case of low coordination, workers have little market power, whereas in the case of very high coordination, the unions recognize their market power and take into account the effect of their wage demands on inflation and unemployment (Calmfors and Driffill, 1988).

[3] Mourre (2009), updated by the European Commission using the Lisbon Assessment Framework Database (LAF), developed by DG-ECFIN, European Commission.

Labor Market Set-Ups in Selected Advanced Countries, 2008–09[1]



Source: Organization for Economic Cooperation and Development.
[1]2008 for EPL and tax wedge; 2009 for unemployment benefit replacement rate. These indicators do not incorporate the impact of reforms taken after 2008 (or 2009) in program countries and Spain.
[2]Average tax wedge on labor; average of two income situations (67 percent and 100 percent of average worker earnings).
[3]Average of net replacement rates over 60 months of unemployment for four family types and two earning levels (67 percent and 100 percent of average worker earnings), including social assistance. Ireland's replacement rate at one-year duration is relatively low, but benefits are stable over time, making them higher on average over a five-year period.

and young people have been especially affected by joblessness (reaching 40 percent and above in Greece and Spain). To a large extent, this reflected the collapse in output and the difficulty in reallocating resources from non-tradable to tradable sectors. However, wage rigidities resulting from inefficient labor market set-ups and, in some cases, the high share of temporary workers, have strongly amplified the unemployment increase and hindered the needed process of internal devaluation. Second, as mentioned above, the significant deterioration in competitiveness in the run-up to the crisis also resulted in part from those flawed institutions. Finally, over the longer term, they contribute to higher structural unemployment and lower potential growth—all features that need to be remedied for these countries to grow out of the crisis.

Although labor market reforms are thus progressing in countries under market pressure, little is being done in countries with stronger recoveries. Some crisis countries are doing so in the context of EU/IMF programs; others, such as Spain and to a lesser extent Italy, are doing so independently—in all, reforms seem appropriately targeted, although in some cases they should be bolder. Greece and Portugal have begun to reduce *EPL* significantly, including by reducing the protection of regular contracts and further steps are in the offing; Spain has also made some progress in this direction. Greece passed a law to introduce more *wage flexibility* by allowing agreements at the

Box 1.1 *(concluded)*

firm level to reduce wages below sectoral minimums;[4] Spain facilitated opt-outs from collective agreements and more recently adopted legislation to allow firm-level agreements; in Italy, rules were modified to allow greater use of firm-level agreements. Other measures taken to stimulate employment include limiting increases in minimum wages (France, Portugal), and introducing special work contracts for youth (with sub-minimum wages and/or lower social security contributions). *Unemployment benefits* will be reformed in Portugal (to reduce overly generous benefits but increase coverage), and Ireland is reducing the generosity of its unemployment benefits, especially for young unemployed and where activation measures are refused, to generate a labor supply response. Finally, efforts at restoring long-term fiscal sustainability through *pension reforms* will have a positive impact on labor utilization, by increasing old-age workers' participation. France, Greece, Ireland, Italy, and Spain have reformed their pension systems.

The relatively good unemployment performance of countries with stronger recoveries should not lead to a let-up in their reform momentum. Unemployment rates have performed much better during the crisis in these countries, and in some cases they are already below pre-crisis levels (for example, Germany). Although this performance could be interpreted as a benefit from earlier labor market reforms (for instance, the Hartz reforms in Germany in the mid-2000s), labor market set-ups remain relatively inefficient in these countries by international comparisons. Given the large potential benefits for employment and living standards, there can thus be no let up in the reform momentum of these countries. In Germany, the tax wedge should be reduced in a manner targeted at groups that are at the margin of the labor market and whose labor participation is more sensitive to taxes (married women, elderly workers, and low-income workers). This would help increase labor force participation and offset population aging, while reducing further the unemployment rate. Unemployment benefits could also be revisited to increase work-incentives. In France, the priority is to tackle the dualism of the labor market, easing further the hiring and firing process, while improving prospects for finding jobs through a strengthening of the activation policies and job placement agencies. It is also necessary to address the high unemployment rate of low-skilled and young workers, including by letting the minimum wage fall further relative to the median wage, and to continue improving work-incentives for seniors.

[4] However, these have been little used so far, as firms have resorted to individual and part-time and irregular contracts instead.

been protracted—on the back of strong domestic opposition in some countries.

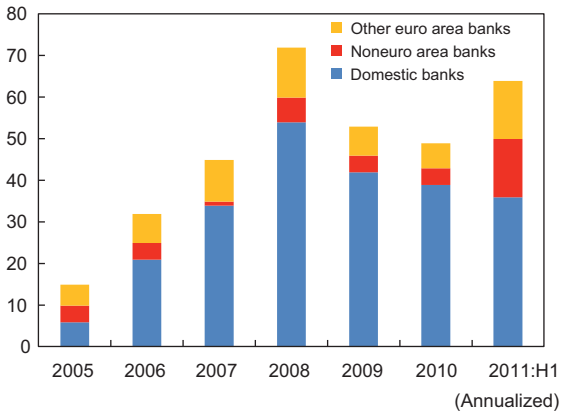
New Headwinds from an Escalating Euro Area Sovereign Crisis

No reprieve from financial markets

Repeated bouts of storms in euro area sovereign debt markets since May 2010 have formed a rip current of doubt about debt sustainability. These doubts are fed by concerns that excessive demand compression in program countries will undermine their adjustment efforts and that high debt countries face poor long-term growth prospects. These concerns have also surfaced outside the euro area, with a similar debate about the pace of adjustment in the United Kingdom, and recent rating action on Japan and the United States.

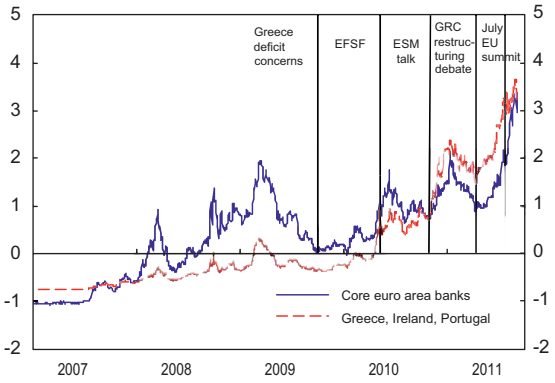
The euro area sovereign debt crisis took another turn for the worse in the summer of 2011. Initially, it was the continued lack of cohesion among European policymakers—especially in the debate on private sector involvement—which unnerved markets. Negative sentiment was further exacerbated when growth outturns disappointed, triggering a general reassessment of world growth expectations. In the euro area, the spiral of credit agencies' downgrades on sovereign ratings carried on, reflecting the general perception that lack of action would inevitably lead to a disorderly debt default. Contagion engulfed other exposed sovereign markets, which until then had been very

Figure 1.12
Euro Area: Mergers and Acquisitions by Nationality of Buyer, 2005–11
(Number of deals)



Source: SNL Financial LC.

Figure 1.13
Euro Area: Banking Sector Risk Index, 2007–11[1]



Sources: Bloomberg L.P.; Datastream; and IMF staff calculations.
[1]Normalized score from a principal component analysis on 5-year senior bank credit default swap spreads, estimated using daily data (Jan. 1, 2005–Sep. 5, 2011). The core risk index comprises CDS spreads of 35 banks and the GIP risk index 10 banks (from GRC, IRL and PRT). The first principal component captures 85.05% of the common variation across core country banks and 85.27% across GIP country banks.

liquid (such as Belgium, Italy, and Spain), also affecting stock valuations and interbank markets.

As a response, European leaders took important steps to strengthen their crisis management framework at their July summit. In particular, to stem contagion, they agreed to make the European Financial Stability Facility (EFSF) more flexible, by allowing precautionary credit lines, funding to strengthen banks' capital buffers even in non-program countries, and secondary market bond purchases. In addition, the terms of EFSF support were softened, by lengthening loan maturities and lowering lending rates (close to funding rates) to support debt sustainability. European leaders also agreed to design and support a new program for Greece, involving voluntary private sector involvement. In that context, the EFSF will provide credit enhancement to underpin the quality of collateral if and when credit agencies downgrade Greek sovereign bonds to selected default status, to allow continued access to ECB liquidity, lifting a key hurdle to the debt restructuring operation.

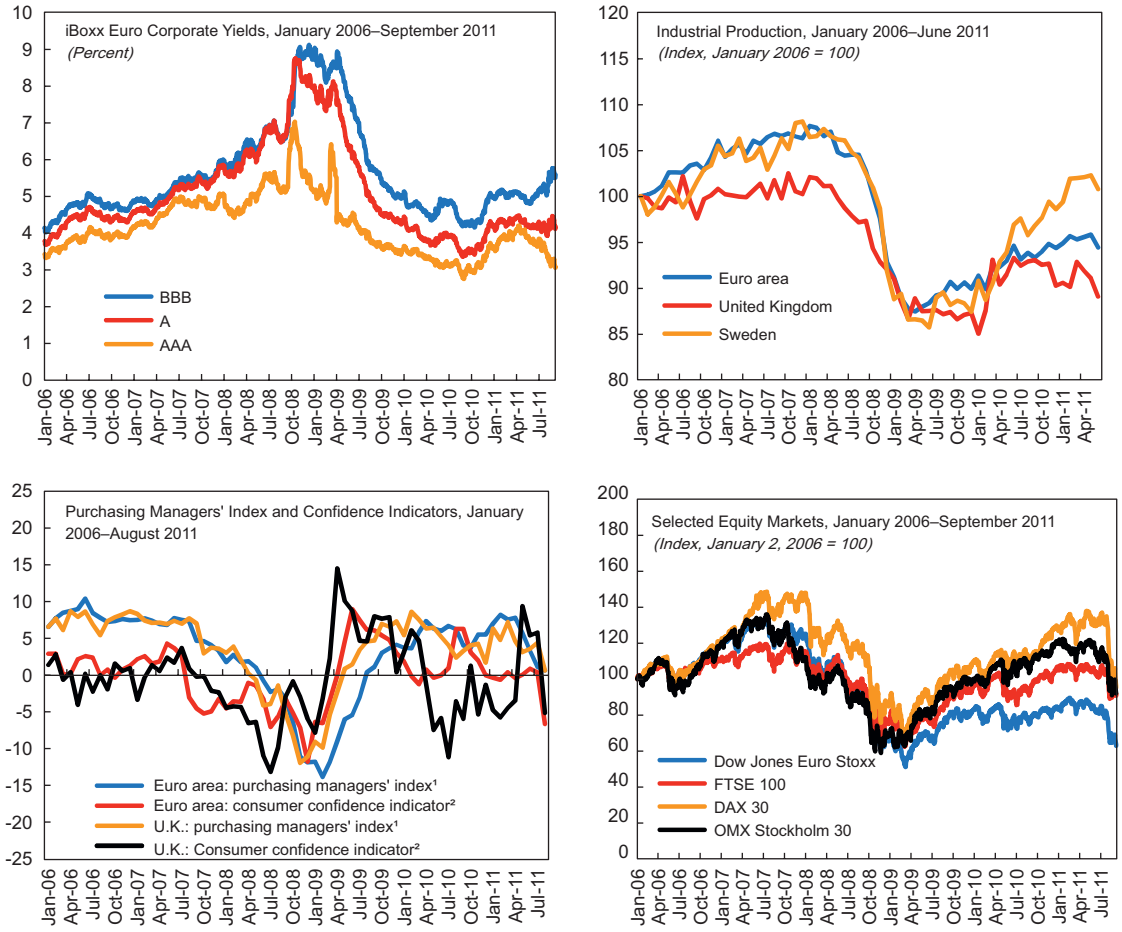
While markets took reassurance in the renewed commitment to secure debt sustainability in the program countries, they remained concerned that some countries might eventually have to follow through with sovereign debt restructuring. After a short lull, market tensions flared up again, with sovereign spreads back to their record highs and stock markets plummeting in August. The debate about side deals on collateral for lending to Greece by some euro area countries did not help. Some sense of order was restored after the ECB stepped up its Securities Market Program (SMP), purchasing significant amounts of sovereign bonds, including of Italy and Spain. From €74 billion in early August, the stock of accumulated securities under the SMP stood at €143 billion a month later. Markets also began to differentiate more between the three program countries, with conditions in the market for Irish sovereign bonds improving the most. To stem renewed tensions in financial markets, the ECB extended its refinancing operations as fixed-rate tender procedures with full allotment until the end of the year, and in August re-introduced a six-month operation. Still, markets have generally remained on tenterhooks (Figure 1.13).

Moderating growth ahead…

In this context, any baseline scenario is subject to considerable uncertainty. What is clear is that growth momentum will be tempered by a combination of factors, ranging from a less supportive global environment—especially in the United States, where a weak recovery is now foreseen—to heightened

Figure 1.14

Selected European Countries: Key Short-Term Indicators, 2006–11



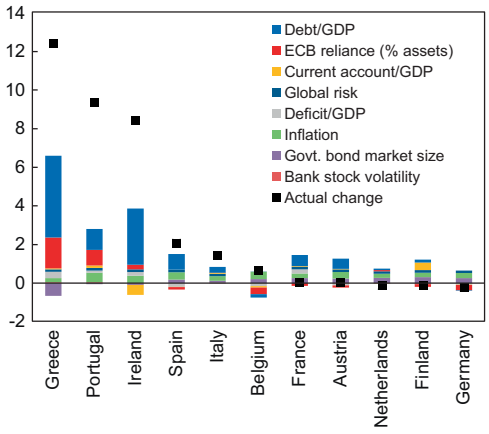
Sources: Datastream; Eurostat; European Commission Business and Consumer Surveys; Haver Analytics; and IMF staff calculations.
[1]Seasonally adjusted; deviations from an index value of 50.
[2]Percentage balance; difference from the value three months earlier.

global risk aversion, and fiscal consolidation (Table 1 in the Introduction and Overview). The escalation of the financial turmoil in the euro area will also continue to take its toll on confidence (Figure 1.14).

Within the euro area, real GDP growth is therefore projected to slow from 1.6 percent in 2011 to 1.1 percent in 2012. Countries under market pressure will continue to suffer from deeper fiscal austerity measures, sharper private-sector balance sheet deleveraging, and more severe structural unemployment—with Portugal and Greece expected to remain in recession until mid-2012 and early 2013, respectively. In Italy and Spain, higher interest costs on the sovereign debt, front-loaded fiscal adjustment, and increased tensions surrounding banks will constitute additional drags on already soft activity. Meanwhile, weaker global growth momentum will weigh on northern euro area countries, slowing the closing of their output gaps and the improvement in their labor markets. Solid corporate profitability will not be much of a mitigating factor as long as confidence remains depressed. Germany, for instance, will see its growth pace halved from 2.7 percent in 2011 to 1.3 percent in 2012.

A similar pattern will be at play outside the euro area. Sweden will continue to benefit from robust domestic demand, supported by low unemployment

Figure 1.15
Selected European Countries: Decomposition of Change in 10-Year Government Bond Spreads vis-à-vis OIS Rate, 2009:Q3–2011:Q2
(Percent)



Sources: Bloomberg L.P.; Datastream; and IMF staff calculations.
Note: The decomposition shows the contribution of various explanatory factors in a panel regression of 10-year government bond spreads vis-à-vis the 10-year overnight index swap (OIS) rate. Square dots represent the actual change in sovereign spreads (in percent) over the period October 31, 2009–July 2, 2011. Country fixed effects are of minor importance and are not reported.

and buoyant asset markets. Yet, its growth is expected to moderate slightly from 4.4 percent in 2011 to 3.8 percent in 2012, as balance sheets and fiscal retrenchment in advanced countries dent demand for Swedish consumer durables and capital goods. Similarly, with little slack left, the Swiss economy will decelerate from 2.1 percent growth in 2011 to 1.4 percent in 2012, as renewed currency appreciation and a weaker external environment will challenge export resilience. By contrast, with serious headwinds on the domestic front from depressed real disposable income, negative wealth effects, and fiscal consolidation, growth in the United Kingdom will remain sluggish in 2011 at 1.1 percent, before rebalancing to 1.6 percent as past depreciation of the pound starts translating into stronger net export growth.

Over the medium term, growth prospects are likely to remain subdued. As is well documented, this is typical following severe financial crises, and likely even more so in the current context where much of the world has been affected and rebalancing is proceeding only gingerly. For the euro area, one additional hurdle is that the widening of interest rates on sovereign bonds is likely to be permanent for many euro area countries, unless the institutional setup of the monetary union is modified. Reversing the strong movement of interest rate convergence that occurred at the creation of the euro, markets now no longer consider sovereign debt as a risk-free asset. The blow-out in spreads has taken place since mid-2009—first touching Greece, Ireland, and Portugal, then Cyprus, and most recently Italy, Spain, and, to a lesser extent, Belgium. An analysis of the fundamentals driving these spreads suggests that higher yield differentials than over the last decade are here to stay in the countries currently under severe market pressure (Figure 1.15). And they might still increase from their current level in other countries with less severe but still substantial fiscal vulnerabilities. As this reassessment proceeds, higher spreads will also be passed on to corporate funding, with detrimental consequences for credit, investment, and confidence in the affected countries (Harjes, 2011).

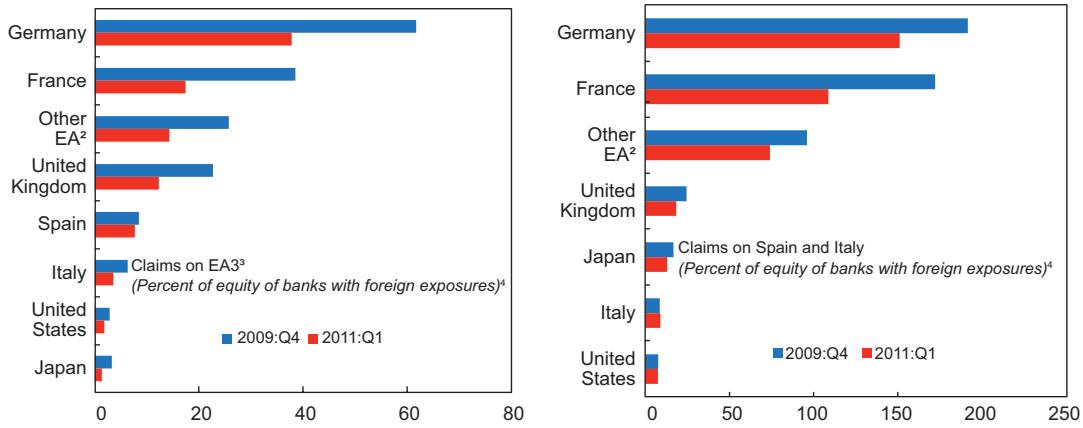
…contingent on no further escalation

Given persistent tensions on euro area sovereign markets and global weaknesses, downside risks remain particularly acute. Any disappointment regarding the implementation of mitigating measures either in one of the program countries or at the euro area level could amplify the shockwaves witnessed during the summer throughout the euro area with adverse repercussions regionally and globally. Funding could dry up, jeopardizing the functioning of the financial system, at a time when banks and sovereigns are facing major rollover requirements. Moreover, despite some reduction since the onset of the crisis, cross-country financial exposures remain substantial (Figure 1.16). Compounding the intra-euro area stresses, a further setback in global growth would generate negative spillovers.

Policies to Stop the Slide

With growth momentum waning and financial tensions rising, policy adjustments are called for.

Figure 1.16
Selected Advanced Countries: Claims on Domestic Banks and Public Sector, 2009:Q4 and 2011:Q1[1]



Sources: Bank of England; Bankscope; BIS Consolidated Banking Statistics; IMF, *International Financial Statistics*; and IMF staff calculations.
[1]The exposures were adjusted using data from the Bank of Ireland to account for the fact that a significant portion of the claims are claims on foreign banks domiciliated in Ireland.
[2]Other EA countries include Austria, Belgium, Ireland, the Netherlands, and Portugal. 2011:Q1 only for Belgium; for all other countries 2010:Q4 data.
[3]EA3: Greece, Ireland, and Portugal.
[4]The exposures are calculated in percent of the equity of banks that have foreign exposures. Banks that do not have exposures to Greece, Ireland, Portugal, and Spain are not included in the computation.

Fiscal consolidation remains necessary, but the pursuit of nominal deficit targets should not come at the expense of risking a widespread contraction in economic activity. Countries that have credible medium-term adjustment plans or front-loaded consolidation efforts should consider allowing automatic stabilizers to work fully. And countries that have access to funding at historically low yields should consider delaying some of their fiscal consolidation if downside risks to growth materialize. The withdrawal of monetary support or the monetary tightening in the cyclically more advanced economies will need to be paused or even reversed in cases where downside risks to inflation and growth persist. Finding a durable solution to the euro area sovereign crisis has become more than overdue, while much work remains to be done on the structural front—to strengthen financial systems and support growth. The former will require some difficult decisions to improve crisis management and a demonstration of unity behind the project of economic and monetary union (EMU) that will convince markets.

Adjusting the policy-mix

While the deteriorated state of public finances—and renewed market concerns over sovereign debt—leave no option but to strengthen fiscal positions, the slowdown in growth is calling for caution. From a long-term perspective, and unlike in some other advanced economies, fiscal consolidation is proceeding appropriately in Europe and should broadly continue as planned (Table 1.1 and Figure 1.17). The effort should remain broad-based, as contingent fiscal liabilities related to aging loom large everywhere. Where pressures are most severe, the consolidation should continue to be front-loaded. Italy's decision to bring forward some of the fiscal consolidation measures initially planned for 2013–14 and the additional measures taken by France and Spain should help relieve some of the recent pressure on sovereign bonds. While fiscal consolidation will undeniably have a negative impact on activity in the short term, the alternative scenario of intensifying market pressures is hardly an option.

Nonetheless, a narrow focus on nominal targets is unwarranted. In many countries, medium-term fiscal consolidation plans are credible or

Table 1.1

Advanced European Countries: Main Macroeconomic Indicators, 2009–12

(Percent)

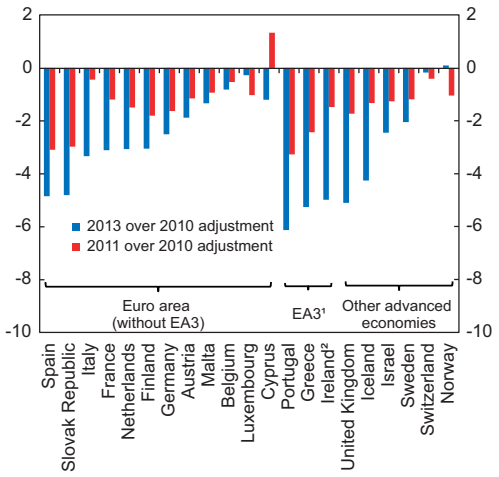
	Current Account Balance to GDP				General Government Overall Balance to GDP[1]			
	2009	2010	2011	2012	2009	2010	2011	2012
Advanced European economies[2]	0.7	0.8	0.8	1.0	-6.4	-6.0	-4.3	-3.3
Euro area	-0.3	-0.4	0.1	0.4	-6.3	-6.0	-4.1	-3.1
Austria	3.1	2.7	2.8	2.7	-4.1	-4.6	-3.5	-3.2
Belgium	0.0	1.0	0.6	0.9	-5.9	-4.1	-3.5	-3.4
Cyprus	-7.5	-7.7	-7.2	-7.6	-6.0	-5.3	-6.6	-4.5
Estonia	4.5	3.6	2.4	2.3	-2.1	0.2	-0.1	-2.3
Finland	2.3	3.1	2.5	2.5	-2.8	-2.8	-1.0	0.3
France	-1.5	-1.7	-2.7	-2.5	-7.5	-7.1	-5.9	-4.6
Germany	5.6	5.7	5.0	4.9	-3.1	-3.3	-1.7	-1.1
Greece	-11.0	-10.5	-8.4	-6.7	-15.5	-10.4	-8.0	-6.9
Ireland	-2.9	0.5	1.8	1.9	-14.2	-32.0	-10.3	-8.6
Italy	-2.1	-3.3	-3.5	-3.0	-5.3	-4.5	-4.0	-2.4
Luxembourg	6.9	7.8	9.8	10.3	-0.9	-1.7	-0.7	-1.2
Malta	-7.5	-4.8	-3.8	-4.8	-3.7	-3.8	-2.9	-2.9
Netherlands	4.9	7.1	7.5	7.7	-5.5	-5.3	-3.8	-2.8
Portugal	-10.9	-9.9	-8.6	-6.4	-10.1	-9.1	-5.9	-4.5
Slovak Republic	-3.2	-3.5	-1.3	-1.1	-8.0	-7.9	-4.9	-3.8
Slovenia	-1.3	-0.8	-1.7	-2.1	-5.6	-5.3	-6.2	-4.7
Spain	-5.2	-4.6	-3.8	-3.1	-11.1	-9.2	-6.1	-5.2
Other EU advanced economies								
Czech Republic	-3.3	-3.7	-3.3	-3.4	-5.8	-4.7	-3.8	-3.7
Denmark	3.8	5.1	6.4	6.4	-2.8	-2.9	-3.0	-3.0
Sweden	7.0	6.3	5.8	5.3	-0.9	-0.3	0.8	1.3
United Kingdom	-1.7	-3.2	-2.7	-2.3	-10.3	-10.2	-8.5	-7.0
Non-EU advanced economies								
Iceland	-11.7	-10.2	1.9	3.2	-8.6	-5.4	-4.1	-2.3
Israel	3.6	2.9	0.3	0.7	-5.6	-4.1	-2.8	-2.2
Norway	12.9	12.4	14.0	12.8	10.6	10.9	12.0	11.2
Switzerland	11.4	15.8	12.5	10.9	0.5	0.4	0.8	0.6
Memorandum								
European Union[2]	-0.1	-0.1	-0.2	0.0	-6.8	-6.5	-4.6	-3.6

Source: IMF, World Economic Outlook database.

[1] Net lending only. Excludes policy lending.

[2] Weighted average. Government balance weighted by purchasing power parity GDP; current account balance by U.S. dollar-weighted GDP.

Figure 1.17
Selected Advanced European Countries: Changes in General Government Fiscal Deficits, 2010–13
(Percentage points of GDP)



Sources: IMF, *World Economic Outlook*; and IMF staff calculations.
[1]Greece, Ireland, and Portugal.
[2]Excluding bank support measures for Ireland.

have been front-loaded, providing room to allow automatic stabilizers to work fully to deal with growth surprises. Furthermore, if activity were to undershoot current expectations and risk a period of stagnation or contraction, countries that face historically low yields (for example, Germany and the United Kingdom) should also consider delaying some of their planned consolidation.

Pursuing the withdrawal of monetary stimulus needs to be reconsidered. While this approach would still be appropriate where output gaps are in the process of closing, the revised outlook sees much lower inflationary pressures with, in some cases, growth falling below potential rates. In the euro area, the recent financial turmoil and downgraded outlook point in this direction, calling on the ECB to maintain a very accommodative stance. In addition, it should lower its policy rate if downside risks to growth and inflation persist. Similarly, in the United Kingdom, where the recovery is tepid, and fiscal tightening stronger, the accommodative stance will need to be maintained for some time, and the Bank of England should further loosen its monetary stance if the recent weakening of the growth and inflation outlook continues. The risk to growth, and hence inflation prospects, should dominate monetary policy decisions, and pockets of excessive risk taking that might arise with policy rates kept very low for a long time should be addressed through macro-prudential or fiscal measures. Countries that have fully regained pre-crisis output levels or are already operating above potential (such as Israel, Norway, and Sweden) are in a slightly more comfortable position, but they may still need to consider a pause in their tightening cycles.

Further breakthroughs in crisis management still needed

Crisis management in the euro area needs to go beyond its current approach to ensure success. Repeatedly, financial markets have signaled pressure points, the ECB has correctly stepped in to prevent financial instability, and policymakers have stated their commitment to do whatever it takes to preserve euro area stability. Measures actually adopted have been steps in the right direction, but political constraints have led to an incremental approach that subsequently proved to remain behind the curve. Implementation of the July 2011 summit measures is proving to be protracted, with parliamentary approval stretching into the autumn, and negotiations on collateral for financial assistance to Greece have weakened the earlier display of unity.

Euro area leaders need to spell out and recommit to a common vision of how the euro area is expected to function in the future. This is essential to anchor market expectations and dispel the prevailing uncertainty. Overall, a definite strengthening of fiscal and economic governance of the monetary union is needed. While strengthening national budgetary rules, countries will need to cede some control over their fiscal position to a central euro area body. Increased ex-ante fiscal risk sharing, through a euro area bond or revenue sharing, is likely to be necessary together with a common approach and backstop to the financial system of the euro area. Policies that remain national will need to be subject to stronger discipline.

In terms of current crisis management, stronger support to countries seeking to overcome debt

sustainability problems may well be crucial. Alternatively, a significant increase in crisis management resources, with a full range of intervention tools, including guarantees and the possibility to backstop the financial system directly, would send a signal of renewed commitment. Of course, none of these tools can absolve countries from taking the necessary adjustment measures to regain competitiveness and secure fiscal sustainability. Hence, increased support will need to be accompanied with strong conditionality.

While these changes are being put in place, a number of actions to deal with the crisis should be undertaken urgently. Implementation of the July 21 summit decisions should be accelerated. Now that the legislative package of governance reforms at the EU level is proceeding, the focus should switch to ensuring that the strengthened Stability and Growth Pact (SGP) and the newly introduced Excessive Imbalance Procedure effectively support a more integrated economic and monetary union. Strengthening the banking system remains essential, and full use should be made of the expanded mandate of the EFSF to assist countries in doing so. Equally important to maintain orderly sovereign debt markets is a continued involvement of the ECB via its SMP. An explicit commitment to do so for as long as necessary, within a strong conditionality framework and backed by a restatement from euro area member states of their readiness to indemnify the ECB for any incurred losses would be very helpful. Strengthening of fiscal institutions is essential.

Put the financial sector on a sounder footing

In the meantime, uncertainties prevailing over bank balance sheets, the high degree of interconnectedness across the EU, and the lack of effective resolution frameworks for large and cross-border banks all continue to rattle investors. Yet, deleveraging achieved by shrinking assets risks undermining the recovery in continental Europe, where bank-based financing still dominates. To avoid the experience of Japan, where insufficient restructuring led to a lost decade of growth, and help mitigate the sovereign tensions affecting many banks, Europe's financial sector needs to be restored to health.

The July 2011 stress tests coordinated by the European Banking Authority (EBA) and their follow-up are unlikely to achieve this outcome. On the positive side, bank equity issuance was stepped up in the run-up to the tests, which were conducted more rigorously than in the previous year, and led to a welcome improvement in transparency. However, the test scenarios for financial shocks, especially on the sovereign front, were mild compared to the most recent market developments. The banks that failed or barely passed the stress tests now have until mid-October 2011 to submit remedial action plans, but not all weak banks were identified by the tests, in part because the EBA sample was limited. They will continue to cast a shadow over the entire banking system, until more comprehensive actions toward restructuring and front-loaded strengthening of banks' capital buffers are undertaken.

Ideally, capital should be raised through private, preferably cross-border, solutions (IMF, 2011b). In some countries, national authorities are already doing so, for example, by fostering injection of private capital into banks (as in the recent initial public offerings [IPOs] conducted by some Spanish saving banks) or cross-border investment (as recently in Ireland, where private equity participation included non-resident investors taking a minority stake). Absent this, supervisors will either have to make the case for injecting public funds into weak banks—which will be difficult in an environment of fiscal consolidation—or close them down. Where public resources are not available, EFSF resources should be tapped to strengthen viable banks' capital buffers, addressing in that manner both bank weaknesses and related tensions on national sovereigns.

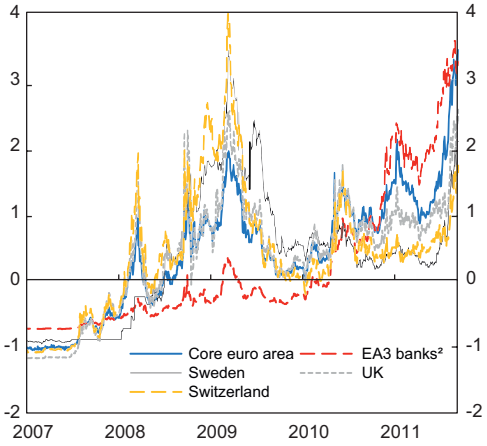
Meanwhile, extraordinary liquidity provision measures should stay in place in the euro area until financial market tension abates. They have helped and continue to support bank profitability during times of acute market stresses (Box 1.2). Refinancing at a fixed rate with full allotment, now in place until at least January

Box 1.2

Monetary Policy and Bank Performance in Advanced Europe

The global financial crisis caused a deep recession in advanced Europe and led to elevated levels of systemic risk. GDP growth in advanced Europe (defined in this box as the euro area, United Kingdom, Sweden and Switzerland) fell between 4.5 and 10 percent on a quarterly basis in late 2008–early 2009. Since then, the economic recovery has proceeded, although cautiously and unevenly. Bank systemic risk remained elevated in the aftermath of the Lehman crisis and has risen again—notably in the euro area—since late 2009, after revelations of the actual size of Greece's fiscal deficit (see first figure). More recently, tensions flared up again in euro area financial markets, as the sovereign crisis spread to markets that so far have remained fairly liquid, leading to new highs in bank systemic risk.

EU Advanced Countries: CDS-Based Bank Risk Indices, 2007–11[1]



Sources: Bloomberg, L.P; Datastream; and IMF staff calculations.
[1]Normalized score from a principal component analysis on 5-year senior bank credit default swap spreads, estimated using daily data (Jan. 1, 2005–Sep. 5, 2011). The core euro area risk index comprises CDS spreads of 35 banks and the EA3 risk index 10 banks from GRC, IRL and PRT. The UK index comprises 6 banks and the index for Sweden and Switzerland 4 banks. The first principal component captures 85.2% of the common variation across core euro area banks and 84.2% across EA3 country banks. For UK, Swedish and Swiss banks, it captures more than 90 percent of the common variation.
[2]EA3: Greece, Ireland, and Portugal.

After some accommodation at the time of the global financial crisis, fiscal and monetary support was being gradually withdrawn, until new tensions erupted in the summer of 2011.

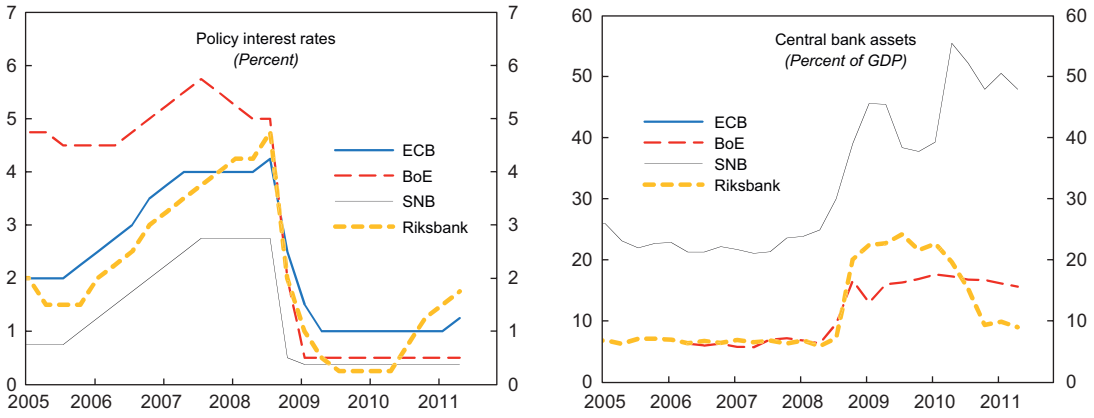
- Fiscal policy was loosened substantially in 2008 and 2009 to support activity during the global recession, and in some cases, to recapitalize banks, guarantee bank debt, and purchase or guarantee bank assets; fiscal support is now being withdrawn everywhere—and in some cases in a more front-loaded way, in response to market pressures.
- Monetary policy has been supportive through conventional measures, with central banks lowering interest rates to very low levels between mid-2008 and early 2009. In some countries, they remain at this lower bound, while in others—including the euro area—they have since been raised (see left panel, second figure). Nevertheless, the general stance remains fairly accommodative.
- Unconventional monetary policy measures were also implemented, in the form of interventions in securities markets and increased reliance by banks on central bank funding. They led to a rapid expansion of central banks' balance sheets and helped banks in need of liquidity (see right panel, second figure). Over the past year, these unconventional measures were scaled back gradually as the situation in the interbank market improved. In the summer of 2011, however, tensions re-emerged in European banking markets and some unconventional policies have been reactivated: the ECB relaunched a 6-month refinancing operation in August and its sovereign bond purchase program was resumed.

IMF staff analysis shows that monetary policy has been supportive in restoring bank profitability. The effects of monetary policy measures on bank profitability are inferred from quarterly and semi-annual panel regressions with proxies for conventional and unconventional policy measures as explanatory variables, separately for banks in the euro area, Sweden and United Kingdom, to account for differences in monetary regimes and policies across

Note: The main author of this box is Nico Valckx.

Europe.[1] These monetary policy measures are interacted with bank-specific variables that reflect key weaknesses, such as low capital buffers, low liquidity, and high reliance on wholesale or high loan-deposit ratios. The estimates show that the differences across banks are particularly important, as weak banks—those with low capital and low liquidity—have benefitted more from lower policy interest rates.

Advanced Europe: Conventional and Unconventional Central Bank Policies

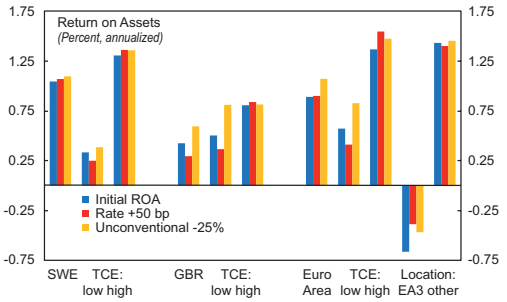


Sources: Bank of England; ECB; Haver Analytics; Riksbank; and SNB.

The results also suggest that withdrawal of unconventional measures should happen only gradually, once tensions abate and frictions on monetary policy transmission channels recede; profitability would then be on safer ground. Bank profitability suffered particularly strongly during periods of increased systemic risk, as the result of malfunctioning markets, which necessitated unconventional policy measures. This is reflected in the panel regressions, which show a significant impact of unconventional policies (both individually and through interaction with indicators of bank strength) on profitability, while also controlling for bank systemic risk through bank systemic risk indicators.

In addition, the withdrawal of monetary policy measures should be embedded in a comprehensive approach to tackle the crisis. Based on the results of the panel regression, a scenario where policy rates are raised and central banks' balance sheets reduced is used to illustrate the effect of monetary policy measures on bank profitability. Altogether, the results indicate that a comprehensive approach to solve the crisis, including recapitalization, is needed for (weak) banks, as is

A rise in interest rates would weigh on (weak) banks' profits, whereas withdrawal of unconventional policies would be positive–reflecting their emergency role.



Sources: Bloomberg, L.P.; and IMF staff calculations.
Note: Shown are panel regression-based simulations for UK (29), Swedish (5) and euro area (86) banks' return on assets (ROA) in 2011:H1 (2010:Q4 for euro area), for a 50 bp increase in the 3-month interbank rate and a 25 percent reduction in the central bank's balance sheet (a proxy for unconventional measures), for all banks and differentiated by levels of TCE capital ratios and location within the euro area (EA3 for banks in GRC, IRL, and PRT). The ROA impact is evaluated at the median, 10th (low) and 90th (high) percentile of the TCE ratio. For Sweden, unconventional policies did not depend on the bank-specific situation.

[1] See Valckx (2011) for a more detailed review of models and methodology of ECB policy impact on euro area banks.

Box 1.2 *(concluded)*

incorporated in current EU/IMF programs. Weak(er) banks should also raise capital in preparation for the withdrawal of standard measures. More specifically:

- *Conventional policies*. When rates are raised by 50 basis points, weaker banks (with low TCE ratio) would suffer, while others would be affected less (see third figure). In the euro area, banks in program countries would see their ROA improve but would remain loss-making, whereas the effect on banks in other euro area countries would be minor. These outcomes reflect differences across banks as regards their balance sheet structure, with weaker banks having more short-term liabilities subject to sharper repricing as interest rates change.
- *Unconventional policies*. High systemic risk has usually coincided with the need for reinforced unconventional policies. This also explains the result that the improvement in banks' performance would coincide with central banks' decision to gradually reduce the size of their balance sheets to pre-crisis levels. As systemic risk recedes and the economic outlook improves, a withdrawal of unconventional measures would see banks capable of raising their profitability, as this would allow for a steepening of the yield curve and an improvement of banks' (net) interest margin.

2012, continues to be critical for banks with limited access to wholesale or interbank funding. Moreover, the ECB might need to reinstate some of its longer-term liquidity provision operations—as it did in August—if stresses on interbank markets intensify further. Yet, these unconventional support measures should not be a substitute for tackling the underlying problems in the financial sector.

Strengthening the financial sector will also entail a larger role for EU-wide regulatory and supervisory institutions. The European Systemic Risk Board (ESRB) and the European Supervisory Authorities (ESAs) started operating at the beginning of 2011, but their credibility still needs to be established. Some gaps in the framework will need to be filled, in particular in formalizing the collaboration among EU institutions and the relationship between these new institutions and national authorities. For example, the EBA should rapidly rise to its role as the guardian of high standards of supervision for banks operating across euro area and EU borders. Beyond, moving decisively in the direction of a unified European financial market will require adopting a single rulebook common to all EU banks, in the spirit of the Single Market, as currently envisaged. Harmonized standards set at the EU level under the CRD4 directive will be important, but the current Commission proposal should be further strengthened by focusing on capital of the highest standards and setting capital requirements that exceed Basel III standards to deal with interconnectedness and the absence of an EU-wide bank backstop. Moreover, sufficient flexibility should be allowed for macro-prudential measures to address country-specific risks, governed by a common macro-prudential policy toolkit, to be developed under the leadership of the ESRB (Box 1.3).

Finally, a unified European financial architecture will not be complete without a common resolution and stability framework, especially for the euro area. To end the intertwining of sovereign and banks' balance sheets once and for all requires setting up mechanisms for rapidly financing resolution efforts, especially for banks operating cross-border or with cross-border implications. The new mandate of the EFSF, which allows funds to be used to strengthen banks' capital buffers, is a step in that direction, but a bolder long-term vision is needed. Ultimately, a European Resolution Authority, backed by common deposit guarantee and resolution funds, would provide a permanent instrument to do so, while also improving ex-post burden sharing and providing an EU-centered backstop.

Growing out of the crisis

Sustainable growth will remain the best ingredient for securing long-lasting fiscal and political stability and safeguarding Europe's cohesion.

Box 1.3

Macro-prudential Reforms in the EU: Objectives and Progress

The new institutions underpinning the EU financial sector architecture are now in place, but their credibility and effectiveness remains to be established. Since January 1, 2011, the European Systemic Risk Board (ESRB), in charge of macro-prudential oversight at the EU level, and the new European Supervisory Authorities (ESAs)—endowed with enhanced supervisory and regulatory powers—have become operational and are expected to become the core of an integrated European financial stability framework. On the macro-prudential front, this framework will require appropriate collaboration among EU institutions to be effective, including sharing of information and adequate access to data. In addition, a set of macro-prudential instruments common to all EU Member States will have to be designed. Because of the deep interconnection of EU financial systems and the scope for externalities, the ESRB will have to play a forceful role in developing and establishing this EU macro-prudential policy toolkit, in collaboration with other EU institutions and national authorities. It should also coordinate national policies and ensure reciprocity to minimize regulatory arbitrage.

To be effective, the EU macro-prudential framework also requires adequate national macro-prudential frameworks.[1] Identification and analysis of risks will require a "bottom-up" element (information and analysis coming from the national level) to complete the analysis and decision-making of the ESRB. The national dimension will be essential to implement on the ground the ESRB "top-down" recommendations too. Because the ESRB's risk warnings and recommendations are not binding on EU Member States, it is essential that strong macro-prudential mandates—including an EU dimension—and powers are established at the national level to overcome likely biases for inaction from policy makers. But to ensure a timely follow-up on ESRB recommendations, it is likewise essential that an *adequate* and *common* macro-prudential toolkit be established at the national level. Since the ESRB has no binding power, the EU Commission is the only institution that can set mandatory standards for macro-prudential frameworks that are common to all EU countries.

Institutional arrangements for macro-prudential oversight are indeed being strengthened at national levels.

- The United Kingdom, as part of the major overhaul of its financial regulatory structure, is taking the lead in establishing a strong macro-prudential framework. A Financial Policy Committee (FPC) in charge of macro-prudential oversight of the United Kingdom's financial system is being established within the Bank of England, alongside the Monetary Policy Committee (MPC).[2] In particular, the FPC will be given power over specific macro-prudential instruments by Parliament and will have the power to require regulatory agencies to take specific policy actions in response to growing systemic risks.
- France established in 2010 a Financial Regulation and Systemic Risk Council (FRSRC),[3] headed by the Finance Minister, to coordinate macro-prudential analysis by the Banque de France and the regulatory agencies, and advise policy-makers on how to prevent and manage systemic risk in the financial sector, taking into account ESRB risk warnings and recommendations.
- In several other countries, macro-prudential oversight (with varying mandates and powers) has been given to the central bank (Hungary and Ireland), or such a move is being considered (Belgium, Germany, and the Netherlands).

Note: The main author of this box is Thierry Tressel.

[1] See Nier and Tressel (2011).

[2] An interim FPC has been established, and met in June 2011. It foreshadows the role of the future statutory FPC and is preparing analysis and proposals on potential macro-prudential toolkits being discussed in EU forums.

[3] Conseil de Régulation Financière et du Risque Systémique, established under Law 2010-1249 of October 22, 2010.

Box 1.3 *(continued)*

- Finally, financial stability councils tasked with the monitoring and coordination of work on financial stability are in place in a number of countries (for example, Belgium, Bulgaria, Italy, Poland, Portugal, and Spain), with an explicit macro-prudential mandate in some cases (Greece).

Many EU countries, notably the "New EU Member States," have already relied upon macro-prudential policies to stem house price appreciation or to limit capital inflows. Even before the financial crisis, macro-prudential policies had been applied in New EU Member States to try and contain credit booms, mostly fueled by capital inflows, with ambiguous results. Measures taken by authorities included enhanced reserve requirements (often differentiated by currency or origin of funds), marginal reserve requirements in excess of an allowed ceiling, higher capital requirements or capital conservation measures, tighter asset classification and provisioning, or limits on loan-to-value-ratios (LTVs) or debt-to-income ratios.[4] More recently, advanced EU countries have introduced measures aimed at containing house price appreciation. In 2007, Italy introduced constraints on LTVs to discourage mortgages with less than 20 percent down-payments. In October 2010, Sweden imposed an 85 percent limit on LTVs. In Spain, the decade-old dynamic provisioning was complemented in 2008 by more stringent treatment for commercial and residential real estate exposures.

However, key elements of an effective EU macro-prudential framework are often still missing. While macro-prudential instruments remain to be established in most EU countries, national agencies or committees often lack the legal power to use, direct to use, or calibrate regulatory tools for macro-prudential purposes. This might be particularly costly when swift and timely response to systemic risks is crucial. In several countries, such as Romania and Sweden, the regulatory agency has strong independent powers to modify financial regulations. But the rule-making power of the regulatory agency is generally constrained and often requires consultation with and approval of the Treasury (as in Finland, France, Germany, and the Netherlands), or in some cases even a parliamentary act.

In that context, a proposal for a macro-prudential toolkit common to all EU countries is being developed under the aegis of the ESRB. The Instrument Working Group of the ESRB is developing key principles that will provide a framework for an EU macro-prudential toolkit. The aim is to address two broad risk dimensions highlighted in international forums: a cyclical dimension associated with credit booms and asset markets, and a time dimension resulting from common exposures and interconnectedness. The ESRB and EU Member States are also of the view that the approach should link instruments to intermediate targets and objectives, but underlying causes of financial instability should be carefully analyzed. Although this approach is appropriate, a common, carefully selected toolkit should not be too restrictive to ensure that proper tools are in place to address future country-specific or sub-regional systemic risks.

As part of the broader implementation of the Basel III standards, the EU Commission is proposing steps to harmonize and coordinate EU macro-prudential policies, but the proposal lacks some flexibility at the national level. The draft Capital Requirement Directive IV (CRD4) released in July 2011 to design the roadmap toward Basel III implementation in the EU proposes to grant power to the Commission to tighten capital requirements temporarily across all EU institutions for specific activities or exposures, under a specific urgency procedure triggered by macro-prudential developments. The draft CRD4 provides some flexibility at the national level for macro-prudential purposes by allowing national authorities to set the countercyclical capital buffer (agreed upon in Basel III) under the guidance and monitoring of the ESRB, and by allowing higher capital requirements and limits on LTV ratios for loans secured by real estate. To prevent regulatory arbitrage, measures taken by national authorities would appropriately apply to all European institutions doing business in or exposed to the

[4] *May 2010 Regional Economic Outlook: Europe—Fostering Sustainability*; and "Macro-prudential Policy: What Instruments and How to Use Them? Lessons from Country Experiences" (MCM Board Paper).

country considered.[5] While these steps go in the right direction, more flexibility will be needed to allow national authorities to introduce macro-prudential tools within the common framework, including adjusting capital and liquidity requirements, or varying risk weights to address emerging systemic risks.

[5] An exception is made for the countercyclical capital buffer for which reciprocity will be mandated only up to 2.5 percent of risk weighted assets, as in the Basel III agreement.

As further elaborated in Chapter 3, the reform agenda spans a wide range of sectors; if implemented thoroughly, it stands ready to unleash Europe's growth potential, in particular its chronically underutilized labor force. Reforms should focus on deepening financial integration—as explained above—and reducing public ownership and involvement in the banking sector, lowering remaining barriers to competition in network industries, retail trade and regulated professions—as foreshadowed in the Services Directives—and addressing labor market segmentation, informal economy and inadequate wage flexibility. In program countries suffering from competitiveness problems, in particular Portugal, a fiscally neutral shift in taxes from labor to consumption (e.g., value added tax—VAT) is being considered to rebalance the economy in favor of exports—which are not subject to VAT—and smooth the required decline in labor costs where downward rigidity to wages exists.

With fiscal consolidation ahead, an additional concern is that public investment in research, education, and infrastructures will be curtailed, harming future growth performance. This should be avoided through appropriate prioritization of spending. Unleashing EU structural funds for the crisis-affected countries could also help to some extent (Marzinotto, 2011). The recent proposal by the European Commission to reduce national co-payments for some of the EU funds directed to program countries goes in that direction, although care should be taken that such funds are properly channeled to growth-enhancing sectors, in particular the tradable sectors, and that bottlenecks are tackled in those countries that have experienced low absorption in the past (Allard and others, 2008).

2. Emerging Europe: Reducing Vulnerabilities to Prevent Financial Turmoil

Emerging Europe's recovery from the deep crisis of 2008/09 continued in the first half of 2011, and growth also picked up in the Baltic countries and Southeastern Europe—the regions most affected by the crisis. But the region is now caught in the downward trend of advanced countries, and the euro area turbulence creates significant risks. Growth is likely to remain stronger than in advanced Europe, but policymakers will need to make headway with addressing the legacies of the 2008/09 crisis, which include large fiscal deficits and high nonperforming loan (NPL) ratios.

Developments in the First Half of 2011

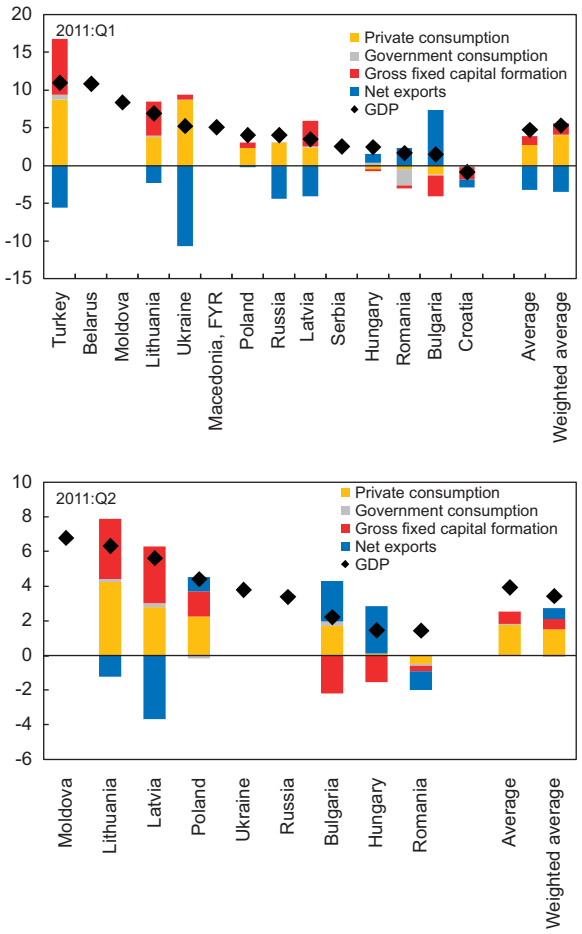
The recovery in emerging Europe strengthened further in late 2010 and early 2011. Year-over-year growth reached 5.4 percent in the first quarter of 2011—the highest growth rate since the 2008/09 crisis. The high regional growth rate was in part driven by double-digit growth in Turkey, but other countries saw strong expansions as well (Figure 2.1). Particularly encouraging was the recovery in countries that had been most affected by the crisis. Romania saw positive year-over-year growth for the first time since end-2008, while growth in the Baltic countries came to almost 6 percent. The only country where year-over-year growth remained negative was Croatia.

The recovery also broadened in terms of demand components, with domestic demand playing an increasingly important role. Domestic demand grew by 16 percent year over year in Turkey, reflecting a credit boom fueled by capital inflows. Domestic demand also remained strong in Russia and Ukraine, buoyed by favorable prices for their energy and metals exports, respectively, and in Poland (Figure 2.2). It recovered strongly in the Baltic countries, even in the absence of a recovery in credit, and remained weak only in Southeastern

Figure 2.1

Emerging Europe: Contributions to GDP Growth[1]

(Year-over-year growth rate, percentage points)

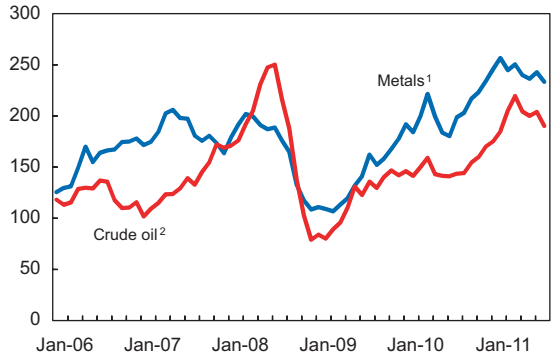


Sources: Haver Analytics; national sources; and IMF staff calculations.
[1]Contributions from inventory investment and statistical discrepancy not shown.

Europe (Figure 2.3). Significant differences remained in cyclical positions, and while in some countries output is now at or above potential, many other countries still have large output gaps. The output gap has closed in Poland, the only EU country that managed to avoid a recession in 2008–09, and turned positive in Turkey, where significant demand pressures have led to a sharp widening of the current account deficit. Excess demand came to a head in Belarus where loose fiscal policy and excess credit

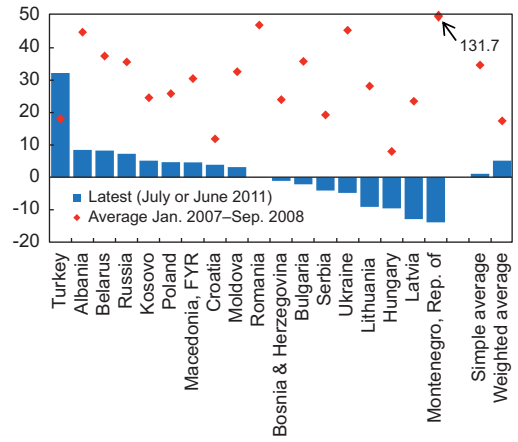
Note: The main authors of this chapter are Lone Christiansen and Yuko Kinoshita.

Figure 2.2
Global Markets: Commodity Prices, January 2006–August 2011
(Index, 2005 = 100)



Sources: Bloomberg; and IMF, Global Data Source.
[1]Includes copper, aluminum, iron ore, tin, nickel, zinc, lead, and uranium price indices.
[2]Simple average of three petroleum spot prices: Dated Brent, West Texas Intermediate, and the Dubai Fateh.

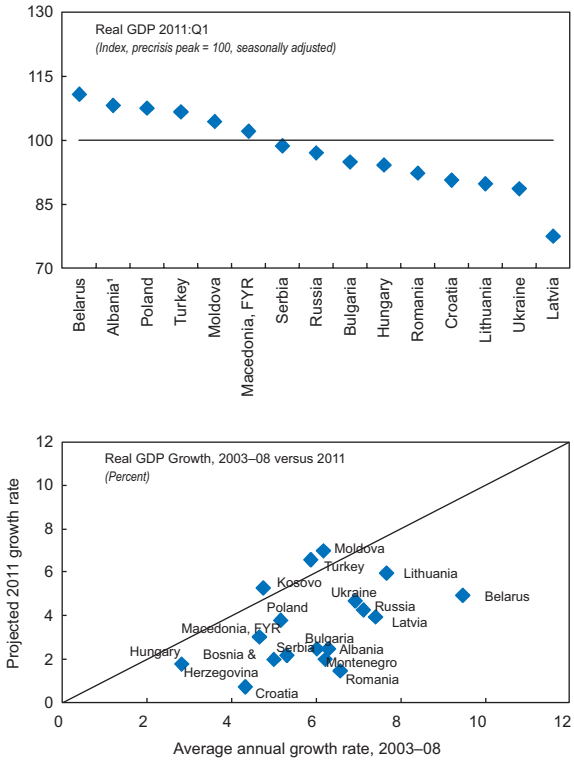
Figure 2.3
Emerging Europe: Real Private Sector Credit Growth, 2007–08 versus Latest[1]
(Percent, 12-month change)



Sources: IMF, *International Financial Statistics*; and IMF staff calculations.
[1]Derived from stock data in domestic currency, adjusted by CPI inflation. May include valuation effects from foreign-currency-denominated loans.

growth culminated in an exchange rate crisis. The Belarusian ruble lost one-third of its value when the central bank suspended intervention to support it in May 2011. But output gaps remain negative in many other countries, including the Baltic countries, which had suffered very deep recessions, and in Southeastern Europe, where the recovery is less advanced. Most countries have not yet reached their precrisis output levels and growth

Figure 2.4
Emerging Europe: Real GDP



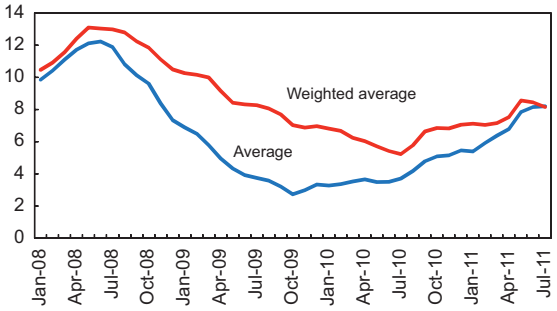
Sources: Haver Analytics; IMF, World Economic Outlook database; national sources; and IMF staff calculations.
[1]2010:Q4 instead of 2011:Q1.

rates often remain lower than those prior to 2008, suggesting not only that the 2008/09 crisis has left the region with a level shift in output, but also that growth rates during the boom years were artificially high (Figure 2.4).[1]

Inflation picked up in the first half of 2011, driven by rising food and energy prices (Figure 2.5). Countries with a large share of food and energy in the basket for the consumer price index (the Baltics and Southeastern Europe) saw a particularly strong rise: in the Baltics, year-over-year inflation reached 5 percent in May. Exchange rate depreciation contributed to rising inflation in Belarus. In addition to food price inflation,

[1] Recessions associated with credit crunches and asset price busts tend to be particularly deep and protracted (Claessens, Kose, and Terrones, 2008).

Figure 2.5
Emerging Europe: Inflation, January 2008–July 2011
(Percent, year-over-year)



Source: IMF, Information Notice System.

strong domestic demand added to inflationary pressures in Russia and Ukraine.

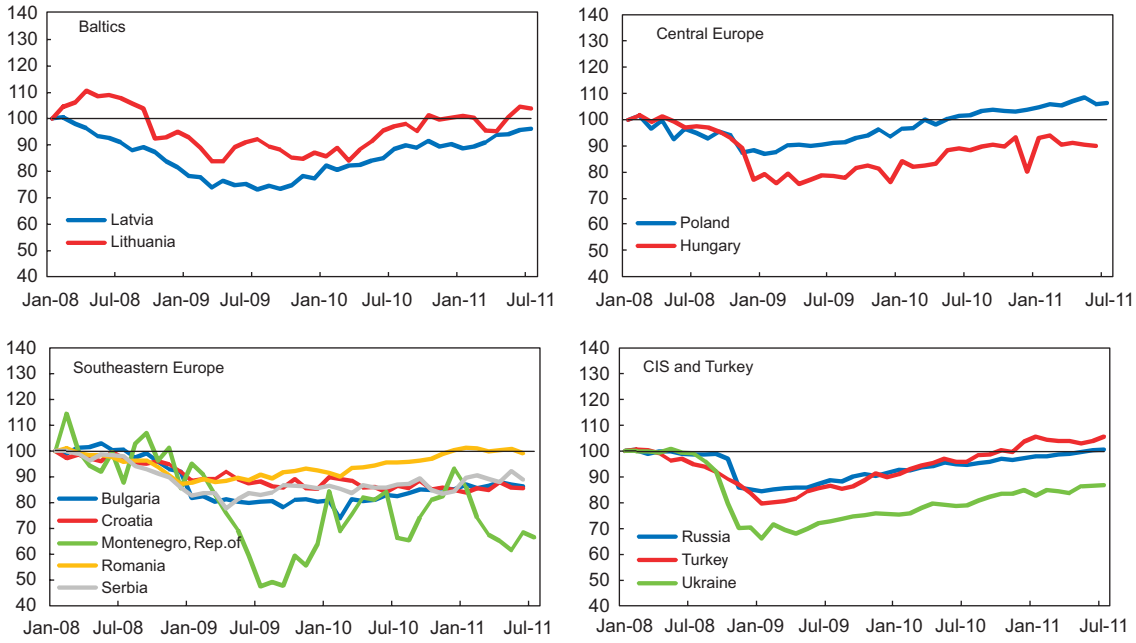
A strong start in 2011 fizzles out in mid-year

A barrage of shocks buffeted the global economy in the first half of the year. Japan was struck by a devastating earthquake and tsunami, which led to disruptions in global supply chains; unrest swelled in some Middle Eastern oil-producing countries, further driving up oil prices; and the euro area ran into major financial turbulence.

By mid-2011, clear signs of a slowdown had surfaced. The financial turmoil intensified in July and August, when the euro area crisis started to affect spreads in Spain and Italy, and Standard & Poor's stripped the United States of its AAA sovereign credit rating. The turmoil was stirred further by concern over new GDP growth figures, which showed that the U.S. economy had been much weaker in the first half of 2011 than previously recognized.

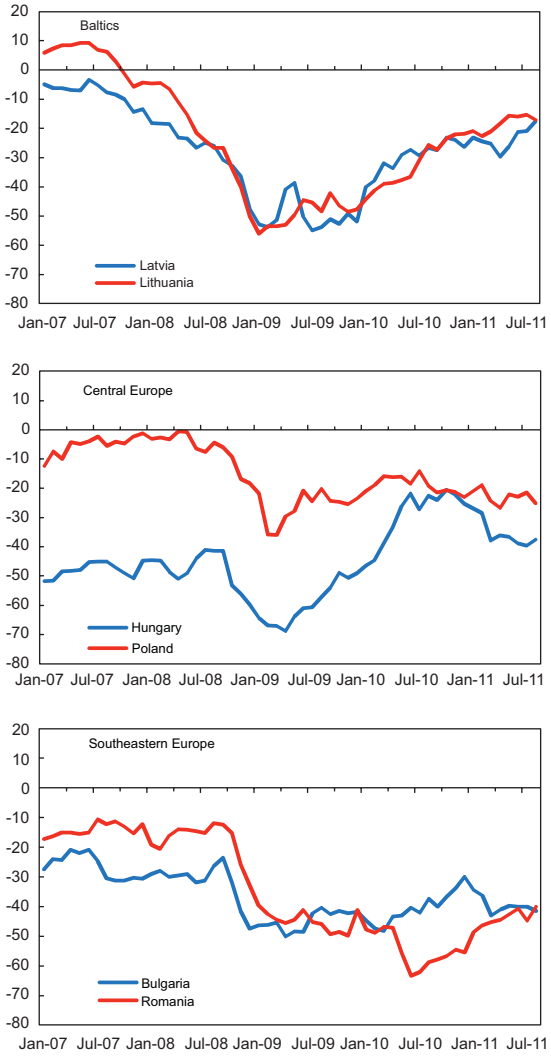
High frequency indicators for emerging Europe started to reflect the worsening external environment by mid-2011. In August, the manufacturing Purchasing Managers Index for Russia and Turkey was in contractionary territory and declined in Hungary and Poland. Industrial production growth also weakened in a number of countries, including Bulgaria, Hungary, and Romania (Figure 2.6),

Figure 2.6
Emerging Europe: Industrial Production, January 2008–July 2011[1]
(Seasonally adjusted, index, January 2008 = 100)



Sources: Haver Analytics; national sources; and IMF staff calculations.
[1]June 2011 for Bulgaria, Croatia, Hungary, Romania, and Serbia.

Figure 2.7
Emerging Europe: Consumer Confidence, January 2007–August 2011
(Seasonally adjusted, percent balance)



Source: Eurostat.
Note: The consumer confidence indicator is the average of the results for four questions: (1) financial situation over the next 12 months; (2) general economic situation over the next 12 months; (3) unemployment expectations over the next 12 months; and (4) savings over the next 12 months. Percent balance equals percent of respondents reporting an increase minus the percent of respondents reporting a decrease.

and consumer confidence worsened in Central Europe, while remaining depressed in Southeastern Europe (Figure 2.7). GDP releases for the second quarter confirmed the decline in economic momentum. Year-over-year growth generally softened for an average decline from 3.9 percent in the first quarter to 3.4 percent in the second quarter in the countries for which data have been released.

Outlook for the Remainder of 2011 and 2012

Emerging Europe's outlook is for a slowdown of growth with heightened downside risks. Developments through mid-2011 attest to a lack of vigor in the global economic recovery and continued fragilities of real developments to financial market turmoil. On a positive note, though, adverse effects from some of the shocks that held back growth in many advanced countries in the second quarter of 2011 should gradually ease (IMF, 2011i). Global manufacturing should rebound as the disruptions to the supply chains emanating from Japan's earthquake and tsunami dissipate, and the headwinds from higher oil prices fade now that prices have receded from their peaks.

Despite the clouded global economic outlook, this *Regional Economic Outlook* revises emerging Europe's full-year growth projections for 2011 slightly upward, to 4.4 percent from 4.3 percent projected in the previous edition, owing to strong growth in the first quarter (Table 2.1). Growth has been revised upward most markedly in Turkey (from 4.6 percent to 6.6 percent), and also in Lithuania and Moldova. By contrast, growth projections have been marked downward in some countries in Southeastern Europe, as well as in Belarus, reflecting its ongoing exchange rate crisis. The upward revisions reflect both higher export growth (from 5.4 percent to 7.1 percent) and higher domestic demand (from 5.6 percent to 6.3 percent). Domestic demand is fairly strong for the year as a whole everywhere, except for Southeastern Europe (Figure 2.8).[2]

[2] Household consumption has made a strong recovery in the European CIS countries, Poland, and Turkey; but recently, consumption growth in Lithuania has also improved markedly. At the same time, fixed investment has grown strongly in Poland, Russia, Turkey, and the Baltic countries.

Table 2.1

Emerging Europe: Growth of Real GDP, Domestic Demand, Exports, and Private Consumption, 2009–12

(Percent)

	Real GDP Growth				Real Domestic Demand Growth				Real Exports Growth[1]				Real Private Consumption Growth			
	2009	2010	2011	2012	2009	2010	2011	2012	2009	2010	2011	2012	2009	2010	2011	2012
Baltics[2]	-15.9	0.7	5.3	3.2	-26.2	1.2	8.4	5.0	-13.2	14.8	12.0	7.0	-20.1	-2.9	4.9	3.4
Latvia	-18.0	-0.3	4.0	3.0	-27.6	-0.9	5.3	4.1	-14.1	10.3	8.7	5.5	-24.1	-0.1	3.0	3.3
Lithuania	-14.7	1.3	6.0	3.4	-25.4	2.5	10.2	5.5	-12.7	17.4	13.9	7.8	-17.7	-4.5	6.0	3.5
Central Europe[2]	-0.1	3.3	3.4	2.7	-3.1	2.6	2.6	2.8	-7.4	10.9	8.1	5.9	0.1	-1.8	2.4	2.5
Hungary	-6.7	1.2	1.8	1.7	-10.8	-4.4	0.2	0.7	-9.6	14.1	9.7	8.5	-6.8	-20.6	0.8	1.0
Poland	1.6	3.8	3.8	3.0	-1.1	4.4	3.2	3.3	-6.8	10.1	7.7	5.2	2.0	3.1	2.8	2.8
Southeastern Europe–EU[2]	-6.6	-0.9	1.8	3.4	-12.8	-1.9	-0.3	3.3	-6.9	14.0	13.8	5.7	-9.5	-1.5	0.7	2.3
Bulgaria	-5.5	0.2	2.5	3.0	-12.7	-4.5	-1.9	3.2	-11.2	16.2	8.1	1.6	-7.6	-1.2	0.9	1.7
Romania	-7.1	-1.3	1.5	3.5	-12.9	-1.0	0.3	3.4	-5.3	13.1	16.0	7.3	-10.2	-1.7	0.7	2.5
Southeastern Europe–non-EU[2]	-3.1	0.7	1.9	2.9	-7.3	-2.8	0.8	1.7	-13.5	12.9	7.1	7.9	-4.3	-1.5	0.4	1.4
Albania	3.3	3.5	2.5	3.5	2.9	-5.1	-0.9	2.6	-0.9	15.2	12.0	9.0	6.4	-2.6	0.4	1.3
Bosnia and Herzegovina	-2.9	0.7	2.2	3.0	-6.8	-1.6	1.4	2.2	-5.7	7.0	1.7	5.9	-4.4	0.4	1.1	2.0
Croatia	-6.0	-1.2	0.8	1.8	-9.0	-3.8	-0.1	1.0	-17.3	6.0	2.4	3.4	-8.5	-0.9	0.2	0.5
Kosovo	2.9	4.0	5.3	5.0	...	...	...	...	...	...	...	...	...	...	...	...
Macedonia, FYR	-0.9	1.8	3.0	3.7	-3.3	-0.1	3.9	4.3	-16.0	24.1	11.4	11.1	-4.9	0.5	1.5	3.8
Montenegro, Republic of	-5.7	1.1	2.0	3.5	-16.9	-3.3	-1.2	1.2	-22.4	9.0	8.2	5.3	-13.4	6.8	-2.3	-0.1
Serbia, Republic of	-3.5	1.0	2.0	3.0	-9.0	-2.2	1.5	1.4	-14.9	19.1	11.2	12.3	-2.3	-3.8	0.2	1.7
European CIS countries[2]	-8.2	4.2	4.4	4.0	-14.4	7.6	7.6	5.1	-6.9	6.8	5.6	3.8	-5.8	3.8	6.8	5.9
Belarus	0.2	7.6	5.0	1.2	-1.4	11.2	-0.2	-1.4	-9.0	7.3	29.6	4.9	0.0	10.1	-1.7	3.5
Moldova	-6.0	6.9	7.0	4.5	-18.6	9.6	9.8	5.6	-12.1	12.8	18.3	9.4	-8.0	9.0	9.6	4.7
Russia	-7.8	4.0	4.3	4.1	-13.9	7.4	8.1	5.3	-4.7	7.1	4.1	3.5	-4.8	2.9	7.2	6.0
Ukraine	-14.8	4.2	4.7	4.8	-23.9	7.1	7.2	6.2	-21.6	4.6	6.0	4.7	-15.0	7.0	7.2	6.3
Turkey	-4.8	8.9	6.6	2.2	-7.4	13.3	9.4	0.4	-5.0	3.4	7.4	6.4	-2.3	6.6	8.0	1.2
Emerging Europe[2,3]	-6.0	4.4	4.4	3.4	-11.0	6.5	6.3	3.6	-7.1	7.8	7.1	5.0	-4.6	2.6	5.5	4.0
New EU member states[2,4]	-3.5	2.2	2.9	2.8	-7.0	1.3	1.9	3.0	-9.0	13.0	10.8	5.8	-3.1	-1.3	1.7	2.5
Memorandum																
Czech Republic	-4.1	2.3	2.0	1.8	-3.7	1.1	0.5	2.7	-10.8	18.0	15.5	5.5	-0.2	0.1	-0.3	2.1
Estonia	-13.9	3.1	6.5	4.0	-20.5	-3.8	6.9	3.9	-18.7	21.7	16.9	4.9	-18.8	-1.9	2.8	4.1
Slovak Republic	-4.8	4.0	3.3	3.3	-7.9	2.7	0.0	3.7	-15.9	16.4	12.6	6.5	0.3	-0.3	0.9	3.4
Slovenia	-8.1	1.2	1.9	2.0	-10.1	0.5	0.8	2.1	-17.7	7.7	6.9	5.2	0.1	0.7	1.3	2.2
European Union[2,5]	-4.2	1.8	1.7	1.4	-4.3	1.4	0.9	1.0	-12.5	10.0	7.3	4.2	-1.8	0.6	0.4	1.0

Source: IMF, World Economic Outlook database.

[1] Real exports of goods and services.

[2] Weighted average. Weighted by GDP valued at purchasing power parity.

[3] Includes Albania, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Hungary, Kosovo, Latvia, Lithuania, FYR Macedonia, Moldova, Republic of Montenegro, Poland, Romania, Russia, Republic of Serbia, Turkey, and Ukraine.

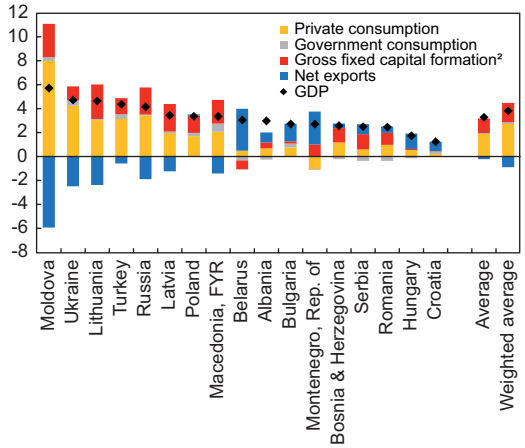
[4] Includes Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovak Republic, and Slovenia.

[5] Includes Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovak Republic, Slovenia, Spain, Sweden, and the United Kingdom.

Global developments cast long shadows in emerging Europe

The clouded economic outlook becomes visible in projections for 2012, which now put growth in emerging Europe at 3.4 percent, compared with 4.3 percent in the May 2011 *Regional Economic Outlook*. The markdowns are strongest for Turkey, where decelerating capital inflows slow domestic demand growth, and Belarus, where external

Figure 2.8
Emerging Europe: Contributions to GDP Growth, 2011–12[1]
(Percentage points, annual average)



Sources: IMF, World Economic Outlook database; and IMF staff estimates.
[1]Annualized percent change from 2010 to 2012. Contributions from inventories and statistical discrepancy not shown.
[2]Investment in the case of Macedonia, FYR.

adjustment proceeds. Downward revisions are more modest for other countries.

Growth differentials within emerging Europe will likely narrow further in 2012. The fortunes of the economies in emerging Europe had diverged strongly during 2009 and 2010, but growth differentials are set to diminish in 2011 and 2012. This reflects a slowdown of domestic demand growth in the countries that used to expand the fastest, such as Turkey and the European CIS countries, combined with a pickup in the hitherto slow-growing countries in Southeastern Europe.

Inflation is projected to decline gradually from current levels. The regional average peaked at 8½ percent earlier in 2011 but has since started to come down. This trend is projected to continue with inflation rates averaging 7.9 percent and 6.8 percent in 2011 and 2012, respectively (Table 2.2). Retreating commodity prices from recent highs are important factors as is the general economic slowdown. Monetary policy tightening in a number of countries, such as Moldova and Poland, was also important in guarding against any unhinging of inflation expectations. The slowing of economic activity tempers inflation risks in the future, although monetary policymakers need to remain vigilant, especially in countries where central bank credibility is less firmly entrenched, or exchange rates have recently depreciated.

Despite some widening, the region's current account deficit remains small. It is projected to widen from 0.6 percent of GDP in 2010 to 0.8 percent of GDP in 2011 and 1.2 percent of GDP in 2012. In 2011, strong domestic demand continues to deteriorate the current accounts, especially in Turkey (to around 10 percent of GDP), but also in Ukraine and the Baltic countries. In Russia, the current account effect of strong import demand is counterbalanced by export prices for oil and gas that are on average higher in 2011 than in 2010. External debt ratios are projected to be above 80 percent in 2011–12 in Bulgaria, Croatia, Hungary, Latvia, and Montenegro.

Risks to the Outlook

Downside risks to the outlook are significant and larger than at the time of the previous edition of the *Regional Economic Outlook*. Although more sluggish global economic growth has always been a possibility, quelling the tensions in euro area debt markets has proved increasingly challenging (Chapter 1). If tensions were to escalate further, the economic and financial outlook for the euro area would darken considerably and the repercussions for emerging Europe would be dire. Exports and cross-border production chains with emerging Europe's premier partners would suffer.

More importantly, much of emerging Europe's financial sector would likely come under pressure. Strained banks in advanced Europe would likely scale back exposure to subsidiaries, nonaffiliated banks, and nonbanks in emerging Europe. A large and sudden disengagement from subsidiaries, though, is unlikely even in a highly adverse scenario. Western banks would first turn to domestic support mechanisms, including liquidity from the European Central Bank (ECB) as collateral allows, lending-of-last-resort from their central banks, and any government schemes that would be put in place in the circumstances. Scope for recourse to funding from subsidiaries would be rather limited as host

Table 2.2

Emerging Europe: CPI Inflation, Current Account Balance, and External Debt, 2009–12

(Percent)

	CPI Inflation (Period average)				CPI Inflation (End of period)				Current Account Balance to GDP				Total External Debt to GDP			
	2009	2010	2011	2012	2009	2010	2011	2012	2009	2010	2011	2012	2009	2010	2011	2012
Baltics[1]	3.8	0.3	4.2	2.5	0.2	3.2	3.4	2.3	6.2	2.5	-0.7	-1.9	121.4	117.2	106.0	98.4
Latvia	3.3	-1.2	4.2	2.3	-1.4	2.4	3.7	1.8	8.6	3.6	1.0	-0.5	164.1	164.8	145.6	134.5
Lithuania	4.2	1.2	4.2	2.6	1.2	3.6	3.2	2.5	4.5	1.8	-1.9	-2.7	91.4	85.7	80.8	76.0
Central Europe[1]	3.6	3.1	4.0	2.9	3.9	3.4	3.5	2.6	-3.0	-3.0	-3.3	-3.7	85.6	82.6	79.2	78.9
Hungary	4.2	4.9	3.7	3.0	5.6	4.7	3.5	3.0	0.4	2.1	2.0	1.5	154.3	138.8	133.6	130.6
Poland	3.5	2.6	4.0	2.8	3.5	3.1	3.5	2.5	-4.0	-4.5	-4.8	-5.1	65.1	67.0	64.1	65.2
Southeastern Europe–EU[1]	4.7	5.3	5.6	3.9	4.0	7.0	4.4	3.5	-5.3	-3.6	-3.1	-3.4	81.9	80.8	79.4	75.3
Bulgaria	2.5	3.0	3.8	2.9	1.6	4.4	3.1	2.8	-8.9	-1.0	1.6	0.6	113.4	101.6	91.5	86.1
Romania	5.6	6.1	6.4	4.3	4.8	8.0	5.0	3.8	-4.2	-4.3	-4.5	-4.6	72.6	74.6	75.8	72.2
Southeastern Europe–non-EU[1]	3.6	3.1	6.1	3.1	3.0	5.0	5.0	2.9	-7.7	-5.4	-6.5	-6.9	79.7	80.0	75.5	72.8
Albania	2.2	3.6	3.9	3.5	3.7	3.4	3.5	2.9	-13.5	-11.8	-10.9	-9.8	33.4	36.6	38.5	37.5
Bosnia and Herzegovina	-0.4	2.1	4.0	2.5	0.0	3.1	4.0	2.5	-6.2	-5.6	-6.2	-5.6	54.9	56.9	59.4	60.1
Croatia	2.4	1.0	3.2	2.4	1.9	1.9	3.6	2.7	-5.2	-1.1	-1.8	-2.7	102.7	102.1	99.5	99.2
Kosovo	-2.4	3.5	8.3	2.6	0.1	6.6	6.2	1.9	-17.1	-16.3	-25.0	-20.5	...	...	...	...
Macedonia, FYR	-0.8	1.5	4.4	2.0	-1.6	3.0	3.7	2.0	-6.7	-2.8	-5.5	-6.6	59.1	59.0	59.7	61.3
Montenegro, Republic of	3.4	0.5	3.1	2.0	1.5	0.7	3.0	1.8	-30.3	-25.6	-24.5	-22.1	97.8	100.2	99.0	97.5
Serbia, Republic of	8.1	6.2	11.3	4.3	6.6	10.3	7.9	3.5	-7.1	-7.2	-7.7	-8.9	81.6	83.1	71.5	63.1
European CIS countries[1]	12.2	7.2	10.5	8.8	9.2	8.9	10.7	7.9	2.9	3.5	4.2	2.4	42.8	38.0	30.8	28.4
Belarus	13.0	7.7	41.0	35.5	10.1	9.9	65.3	20.0	-13.0	-15.5	-13.4	-9.9	44.8	52.1	68.2	72.3
Moldova	0.0	7.4	7.9	7.8	0.4	8.1	9.5	6.0	-8.5	-8.3	-9.9	-10.3	65.5	68.1	65.2	67.9
Russia	11.7	6.9	8.9	7.3	8.8	8.8	7.5	7.1	4.1	4.8	5.5	3.5	38.2	33.0	25.6	23.0
Ukraine	15.9	9.4	9.3	9.1	12.3	9.1	10.7	8.5	-1.5	-2.1	-3.9	-5.3	88.2	85.1	76.2	73.2
Turkey	6.3	8.6	6.0	6.9	6.5	6.4	8.0	5.7	-2.3	-6.6	-10.3	-7.4	43.7	39.5	43.7	45.8
Emerging Europe[1,2]	8.5	6.3	7.9	6.8	7.0	7.1	8.2	6.0	-0.3	-0.6	-0.8	-1.2	57.4	52.0	47.5	45.5
New EU member states[1,3]	3.1	2.9	3.9	2.8	2.9	3.8	3.3	2.7	-2.8	-2.8	-2.8	-3.2	79.5	78.0	74.6	73.5
Memorandum																
Czech Republic	1.0	1.5	1.8	2.0	1.0	2.3	1.6	2.2	-3.3	-3.7	-3.3	-3.4	45.5	47.4	44.9	46.6
Estonia	-0.1	2.9	5.1	3.5	-1.7	5.4	4.6	3.3	4.5	3.6	2.4	2.3	125.8	117.6	94.5	89.2
Slovak Republic	0.9	0.7	3.6	1.8	0.1	1.3	2.7	2.9	-3.2	-3.5	-1.3	-1.1	71.9	72.4	72.5	72.0
Slovenia	0.9	1.8	1.8	2.1	1.8	1.9	2.1	2.3	-1.3	-0.8	-1.7	-2.1	81.9	85.6	80.6	80.5
European Union[1,4]	0.9	2.0	3.0	1.8	1.2	2.5	2.8	1.7	-0.1	-0.1	-0.2	0.0	...	...	...	...

Source: IMF, World Economic Outlook database.

[1] Weighted average. CPI inflation is weighted by GDP valued at purchasing power parity, and current account balances and external debt are weighted by U.S. dollar GDP.

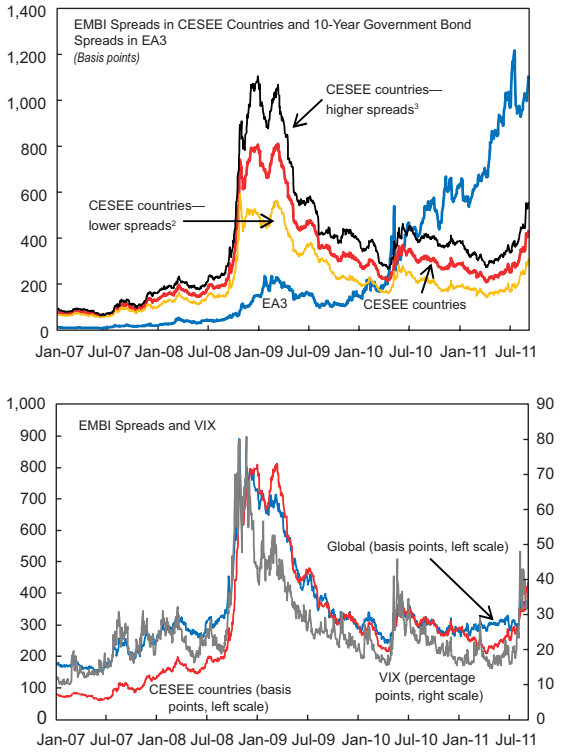
[2] Includes Albania, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Hungary, Kosovo, Latvia, Lithuania, FYR Macedonia, Moldova, Republic of Montenegro, Poland, Romania, Russia, Republic of Serbia, Turkey, and Ukraine.

[3] Includes Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovak Republic, and Slovenia.

[4] Includes Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovak Republic, Slovenia, Spain, Sweden, and the United Kingdom.

Figure 2.9

CESEE and EA3 Countries: Funding Costs, January 1, 2007–September 6, 2011[1]



Sources: Bloomberg; Datastream; and IMF staff calculations.
[1]CESEE comprises Bulgaria, Croatia, Hungary, Lithuania, Poland, Romania, Russia, Serbia, Turkey, and Ukraine. EA3 comprises Greece, Ireland, and Portugal.
[2]Simple average for Bulgaria, Lithuania, Poland, Russia, and Turkey.
[3]Simple average for Croatia, Hungary, Romania, Serbia, and Ukraine.

country regulators would step in if regulatory liquidity or capital limits were at risk.

The most likely impact would therefore be a renewed credit crunch. Subsidiaries would see a measured but persistent funding drain from their parents, and nonaffiliated banks that rely on wholesale funding would have to struggle even more. Both would have little choice but to curtail their own lending activities. A reduction of cross-border lending to nonbanks in emerging Europe would compound the credit crunch further.

Key Policy Issues

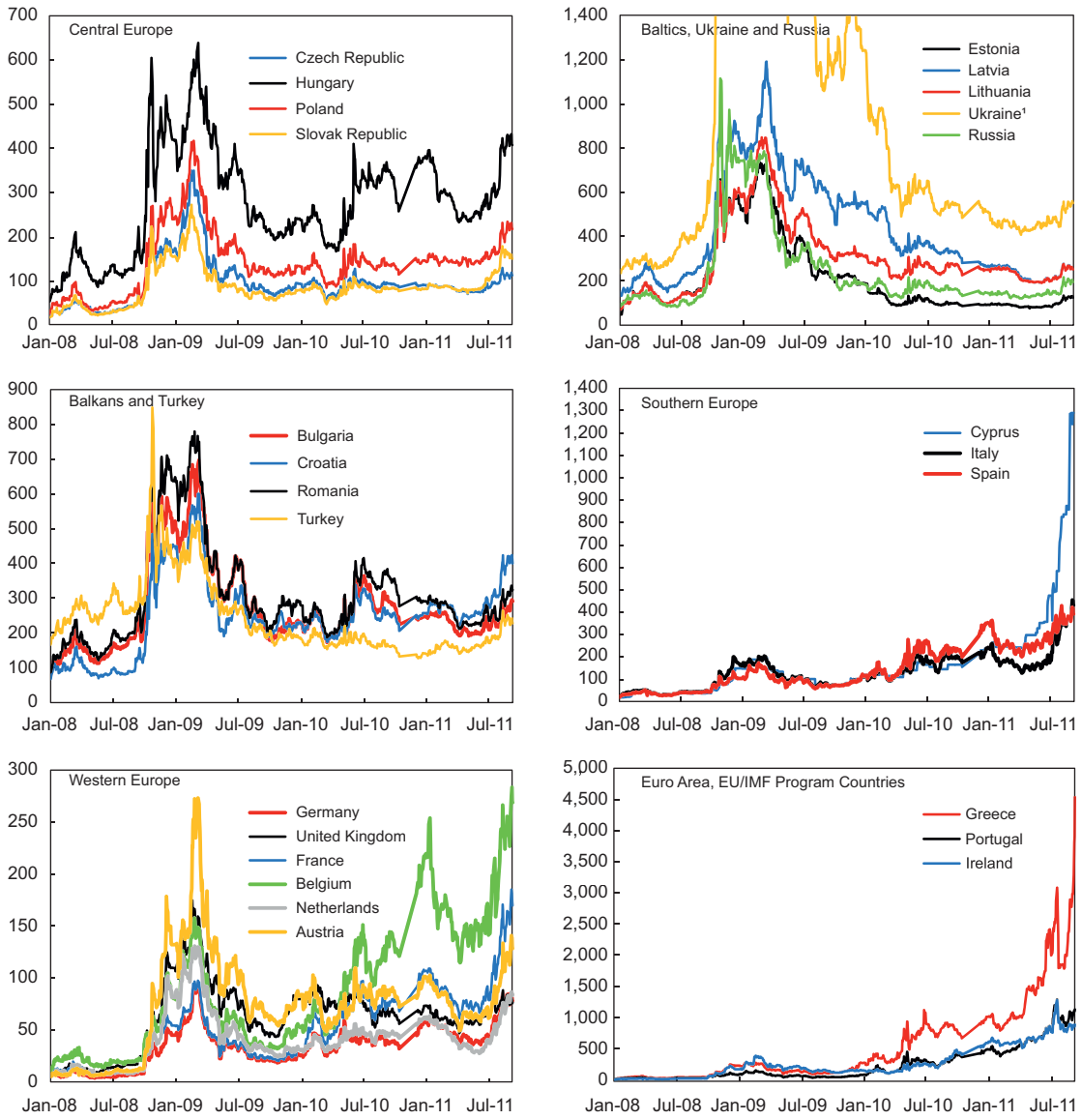
In the past year and a half, financial contagion from the crisis in advanced Europe has largely bypassed emerging Europe. While spreads in the euro area periphery were on an upward trend, spreads in emerging Europe did not follow suit. Flare-ups of turmoil in the euro area often led to increases in spreads in emerging Europe, but those episodes largely reflected increases in global risk aversion rather than increased concerns vis-à-vis the region.[3]

In mid-2011, there are some indications that this may have started to change. Sovereign spreads in some countries have responded to the sharply widening spreads in the euro area (Figures 2.9 and 2.10). Croatia and Hungary were particularly affected, with spread increases during July and August matching those in Italy and Spain. Spreads in the rest of emerging Europe were out by about half as much. The risk that financial tensions will spread to emerging Europe is heightened by a number of legacies left by the 2008/09 crisis: fiscal vulnerabilities that were low before the crisis have increased sharply, and nonperforming loans (NPLs) have shot up. And western European banks continue to play a key role in emerging Europe's financial sectors. In addition, the strong Swiss franc remains a challenge for households and banking sectors in Croatia, Poland, and especially Hungary, where a large share of mortgages are denominated in that currency.

In a global environment where risk aversion toward individual countries can suddenly rise, emerging Europe should aim to reduce its vulnerabilities by addressing the remaining legacies of the 2008/09 crisis. Policymakers will need to make headway in repairing public finances, including through the strengthening of fiscal frameworks to underwrite lasting fiscal discipline and lower the high ratios of banks' NPLs to improve conditions for lending. Good policies matter not only because they will reduce vulnerabilities, but also because they will boost convergence. Given the still large income differences between emerging and advanced Europe, there remains significant scope for further catching-up with advanced Europe, but it will not be automatic. It is contingent on a combination of sound macroeconomic policies and structural

[3] For a further discussion, see IMF (2011e).

Figure 2.10
Selected European Countries: 5-Year CDS Spreads, January 1, 2008–September 6, 2011
(Basis points)



Source: Credit Market Analysis Datavision.
[1]Ukraine CDS spreads reached above 5,400 bps during crisis.

reforms that help ensure balanced growth and rising potential.

Rebuilding fiscal buffers

The region's fiscal deficit is projected to decline below 2½ percent of GDP in 2011 and 2012, from 4.5 percent of GDP in 2010 and 6.2 percent of GDP in 2009 (Table 2.3). Behind this improvement in the regional average, however, are large differences across countries. Although some countries are seeing rapid improvements, others make much less headway, and some none at all.

Among the countries seeing rapid improvements in their fiscal position is Poland, which is undertaking substantial fiscal consolidation in 2011 and 2012.

Table 2.3

Emerging Europe: Evolution of Public Debt and General Government Balance, 2009–12[1]

(Percent of GDP)

	General Government Balance				Public Debt			
	2009	2010	2011	2012	2009	2010	2011	2012
Baltics[2]	-8.7	-7.4	-5.0	-3.6	30.9	39.2	41.6	43.1
Latvia[3]	-7.8	-7.8	-4.5	-2.3	32.8	39.9	39.6	40.5
Lithuania	-9.2	-7.1	-5.3	-4.5	29.6	38.7	42.8	44.6
Central Europe[2]	-6.7	-7.1	-3.9	-3.7	57.2	60.5	60.3	60.4
Hungary[4]	-4.5	-4.3	2.0	-3.6	78.4	80.2	76.1	75.5
Poland	-7.3	-7.9	-5.5	-3.8	50.9	55.0	56.0	56.4
Southeastern Europe–EU[2]	-5.8	-6.0	-4.0	-2.7	22.0	28.5	30.6	31.3
Bulgaria[3]	-0.9	-3.9	-2.5	-2.2	15.6	17.4	17.8	20.5
Romania	-7.3	-6.5	-4.4	-2.8	23.9	31.7	34.4	34.4
Southeastern Europe–non-EU[2]	-4.5	-4.4	-4.6	-4.0	37.3	42.2	45.1	46.1
Albania[3,8]	-7.4	-4.2	-3.7	-4.5	59.8	58.2	59.4	59.2
Bosnia and Herzegovina	-5.5	-4.3	-3.0	-1.6	35.9	39.7	39.6	38.4
Croatia[3]	-4.1	-5.0	-5.7	-5.1	34.5	40.6	47.5	50.0
Kosovo[3]	-0.6	-2.6	-5.0	-3.5	...	...	...	...
Macedonia, FYR	-2.7	-2.5	-2.5	-2.2	23.8	24.6	26.3	28.2
Montenegro, Republic of[3,8]	-6.5	-3.8	-3.4	-2.5	40.7	44.1	43.1	42.2
Serbia, Republic of[3]	-4.5	-4.6	-4.6	-3.9	38.2	44.9	44.1	44.5
European CIS countries[2]	-6.1	-3.6	-1.2	-2.0	13.5	14.6	14.8	15.2
Belarus[3]	-0.7	-1.8	-0.9	-1.0	21.7	26.5	46.3	45.6
Moldova[3]	-6.3	-2.5	-1.9	-1.2	29.1	26.6	23.6	21.7
Russia[3]	-6.3	-3.5	-1.1	-2.1	11.0	11.7	11.7	12.1
Ukraine[3]	-6.3	-5.7	-2.8	-2.0	35.4	40.1	39.3	39.4
Turkey[3]	-6.2	-3.7	-1.4	-1.4	46.1	42.2	40.3	38.1
Emerging Europe[2,5]	-6.2	-4.5	-2.1	-2.3	30.5	31.0	29.9	29.2
New EU member states[2,6]	-6.5	-6.4	-3.9	-3.5	42.6	47.3	48.6	49.2
Memorandum								
Czech Republic	-5.8	-4.7	-3.8	-3.7	35.4	38.5	41.1	43.2
Estonia	-2.1	0.2	-0.1	-2.3	7.2	6.6	6.0	5.6
Slovak Republic	-8.0	-7.9	-4.9	-3.8	35.4	41.8	44.9	46.9
Slovenia[3]	-5.8	-5.8	-3.4	-3.8	35.5	37.3	43.6	47.2
European Union[1,7]	-6.7	-6.4	-4.5	-3.5	74.3	79.8	82.3	83.7

Source: IMF, World Economic Outlook database.

[1] As in the WEO, general government balances reflect IMF staff's projections of a plausible baseline, and as such contain a mixture of unchanged policies and efforts under programs, convergence plans, and medium-term budget frameworks. General government overall balance where available; general government net lending/borrowing elsewhere.

[2] Average weighted by GDP in U.S. dollars.

[3] Reported on a cash basis.

[4] Fiscal surplus in 2011 reflects revenue from rollback of pension reform. Assets of 11 percent of GDP are transferred from private-sector to public pension funds.

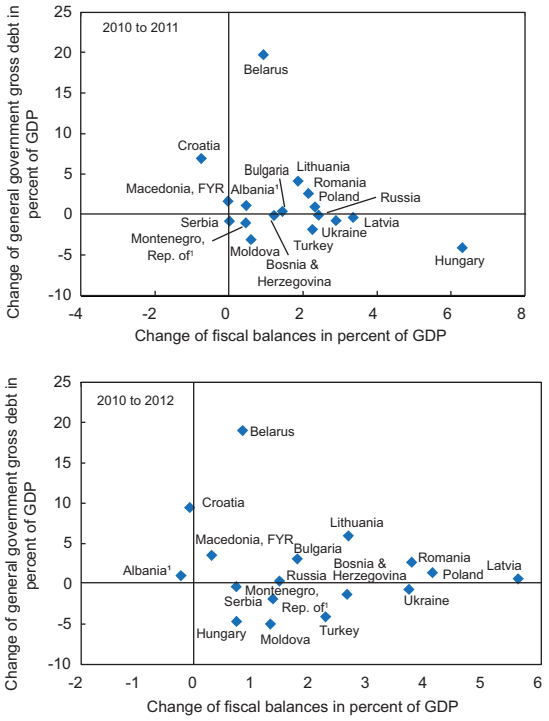
[5] Includes Albania, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Hungary, Kosovo, Latvia, Lithuania, FYR Macedonia, Moldova, Republic of Montenegro, Poland, Romania, Russia, Republic of Serbia, Turkey, and Ukraine.

[6] Includes Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovak Republic, and Slovenia.

[7] Includes Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovak Republic, Slovenia, Spain, Sweden, and the United Kingdom.

[8] The data may differ from those in other published sources owing to a conversion to GFSM 2001. For Albania, the non-converted 2010 fiscal balance is –3.7 percent of GDP. For Montenegro, the equivalent values in 2009 and 2010 are –5.3 and –3.9 percent of GDP, respectively.

Figure 2.11
Emerging Europe: Change in Overall Fiscal Balances and General Government Gross Debt, 2010–12
(Percentage points of GDP)



Source: IMF, World Economic Outlook database.
[1]Data may differ from those in other published sources owing to conversion to GFSM 2001.

This should reduce its deficit by about 4 percentage points of GDP in two years, although further consolidation will be needed to put public debt firmly on a downward path in the medium term. Fiscal deficits are also declining rapidly in Romania, Ukraine, and the Baltic countries. Given that Ukraine's fiscal adjustment in 2010 was kept modest because of concerns about the fledgling recovery, the currently envisaged structural tightening is both necessary and timely, considering the rebound in private sector activity and the need to build credibility. Likewise, Romania is continuing fiscal consolidation under the IMF-supported program, and recently saw encouraging tax revenue performance. Nonetheless, improvements in revenue collection, optimization of expenditures, and further discretionary measures remain critical to underwrite the projected budget deficit of less than 3 percent of GDP in 2012.

Other countries are seeing less improvement, if any at all. Albania and Croatia are experiencing deteriorations (Figure 2.11). In Turkey, the headline fiscal balance has improved, reflecting transient revenues from the import and domestic demand boom, while spending has grown rapidly. In Russia, the non-oil fiscal deficit—which is the relevant measure of the fiscal stance in oil-producing countries, given the volatility of oil prices and the nonrenewable nature of oil reserves—will remain substantially higher than its precrisis levels, despite consolidation measures. In addition, the composition of fiscal consolidation is not supportive of growth, as it relies heavily on increased payroll taxes and cuts to public investment.

Despite fiscal consolidation in emerging Europe, fiscal vulnerabilities remain high in a number of countries (Figure 2.12). Fiscal deficits in 2011 are above 4 percent of GDP in Croatia, Kosovo, Latvia, Lithuania, Poland, Romania, and Serbia. Public debt exceeds 50 percent of GDP in Albania, Hungary, and Poland. Albania and Hungary have relatively high shares of short-term debt that account for more than 10 percent of GDP. Furthermore, a significant share of public debt in a number of countries is denominated in foreign currency, exposing public finances to currency risk.

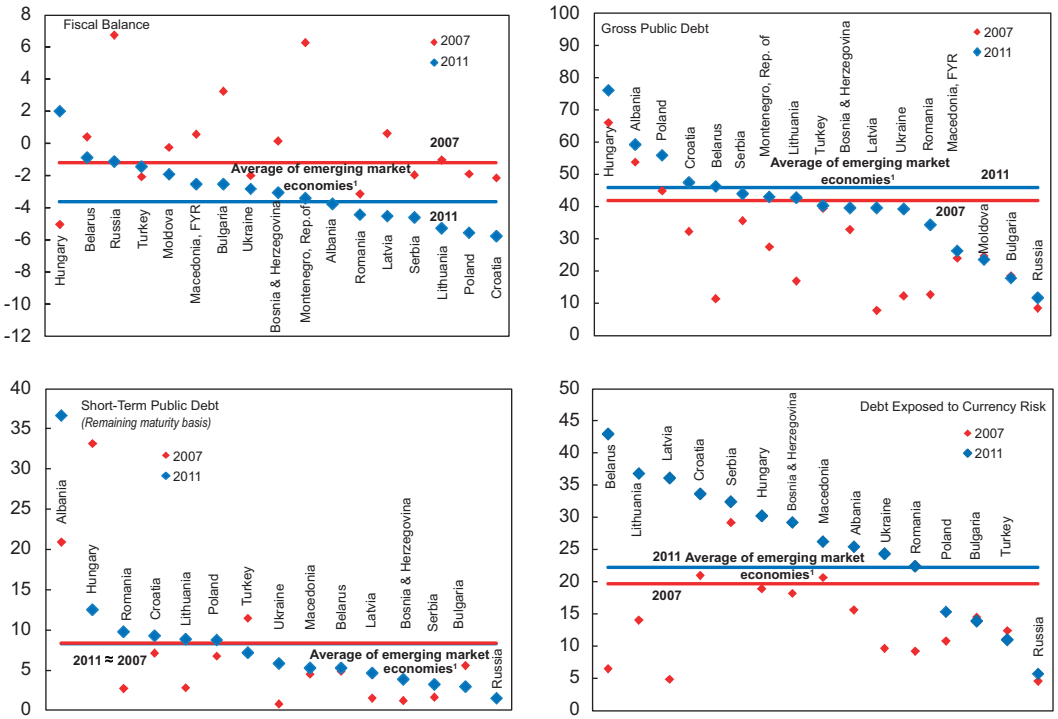
It is imperative that these vulnerabilities be reduced further. Countries should not take solace in the fact that spreads have remained relatively low so far. Past experience in countries with significant public finance problems shows that spreads can remain low until a very late stage.

One of the lessons from the crisis in 2008/09 is that fiscal policy should be more prudent in good times to build adequate buffers to be used when the cycle turns. In the run-up to the crisis, fiscal balances were inflated by high cyclical revenues related to demand booms. These fiscal revenues were primarily used to increase government spending. Consequently, many countries barely had any fiscal surplus on the eve of the crisis despite strong GDP growth. When revenues collapsed during the crisis, this led to large fiscal deficits, forcing a procyclical fiscal tightening that compounded the contraction in domestic demand.

Figure 2.12

Emerging Europe: Fiscal Vulnerability Indicators in Perspective

(Percent of GDP)



Sources: IMF, World Economic Outlook database; and IMF staff calculations.

[1]Covers 50 major emerging market economies worldwide.

Fiscal rules can help…

Fiscal rules can help ensure that this mistake is not repeated in future upswings. Fiscal rules can enhance the credibility of consolidation plans and entrench fiscal discipline (Debrun and Kumar, 2007a). Empirical studies for EU countries suggest that national fiscal rules have been generally associated with improved fiscal performance.[4] Setting up nonpartisan fiscal agencies (that is, fiscal councils) that provide macroeconomic forecasts for budget preparation can reduce further the optimistic biases that are found in official government forecasts and contribute to greater transparency (Debrun and Kumar, 2007b; Council of the European Union, 2010).

Among various fiscal rules, an expenditure rule can be particularly useful in reducing the tendency to increase public spending during good times (Box 2.1). An expenditure rule can limit the growth of expenditures to potential growth or to a prudent level of medium-term output growth. If such a rule is adequately designed, the expenditure-to-GDP ratio would fall during good times, rise during bad times, and be constant over the entire cycle. Empirical evidence suggests that rules can also be effective in ensuring strong fiscal consolidation (Box 2.2).

Fiscal rules originated in advanced countries, but increasingly they are also applied in emerging market countries. Eighty countries now have fiscal rules in place, up from just seven in 1990 (IMF, 2010b). In Latvia and Lithuania, fiscal responsibility laws and new deficit rules are being planned. In Poland, the revised Public Finance Act (effective since January 2010) has defined corrective measures to be taken if the thresholds under the debt rule are breached.

[4] Fiscal rules have also been identified as a factor for successful fiscal consolidation. An IMF study shows that 24 episodes of large fiscal adjustments since 1980 benefited from formal budgetary constraints (IMF, forthcoming).

Box 2.1

The Appeal of Fiscal Expenditure Rules in Countries of CESEE

This box seeks to illustrate the benefits that rules-based fiscal expenditure policy would have in countries of central, eastern, and southeastern Europe (CESEE). The numerical simulations use a basic rule to bring out the effects on public finances in broad terms. In practice, one would want to apply more refined expenditure rules, supplement them with other fiscal reforms, and take into account country idiosyncrasies to achieve optimal fiscal outcomes. For example, in oil-producing countries, a permanent income oil model rule may be the best way to ensure long-term fiscal sustainability and equitable intergenerational use of the oil wealth (Medas and Zakharova, 2009).

The simulations suggest that expenditure rules could help make fiscal policy less procyclical and lower public debt in CESEE countries (first figure).[1] Had the real growth rate of primary expenditure been limited to a prudent estimate of medium-term real GDP growth, fiscal policy would have been significantly less expansionary in good times. Larger fiscal buffers would have been accumulated when economic growth was above trend, thereby reducing the need for strong fiscal tightening during downturns. Moreover, thanks to the large fiscal surpluses achieved during good times, public finances would in general have remained in better shape than the actual outcomes, despite much higher real expenditure growth induced by the rule in bad times. Setting the rule in nominal or real terms does not affect the results much as long as inflation remains reasonably predictable. A nominal rule tends to deliver stronger countercyclical policies if inflation surprises on the upside in booms and on the downside in bad times. This could usefully reinforce the countercyclical character of the rule. However, nominal rules do not perform well in the rare circumstances in which unexpectedly high inflation coincides with cyclical downturns. Latvia is a point in case—expenditure growth is much lower under a nominal rule than under a real one.

The expenditure-smoothing feature of the rule is particularly apparent in countries that experienced a pronounced boom-bust cycle, such as the Baltics or Romania, and in countries where fiscal revenues were inflated by surging oil prices (second figure). Most notably in these countries, fiscal rule-based expenditures would have been significantly below actual expenditures in good times. And the fiscal buffers accumulated in boom periods would have permitted maintaining high expenditure growth without leading to excessive fiscal deficits in bad times. Interestingly, the rule would have been much less binding in countries that had an expenditure-type fiscal rule already in place (for example, Finland, the Netherlands, Sweden, and Switzerland) or in countries with more restrained expenditure growth in the boom period (for example, Czech Republic and Slovenia).

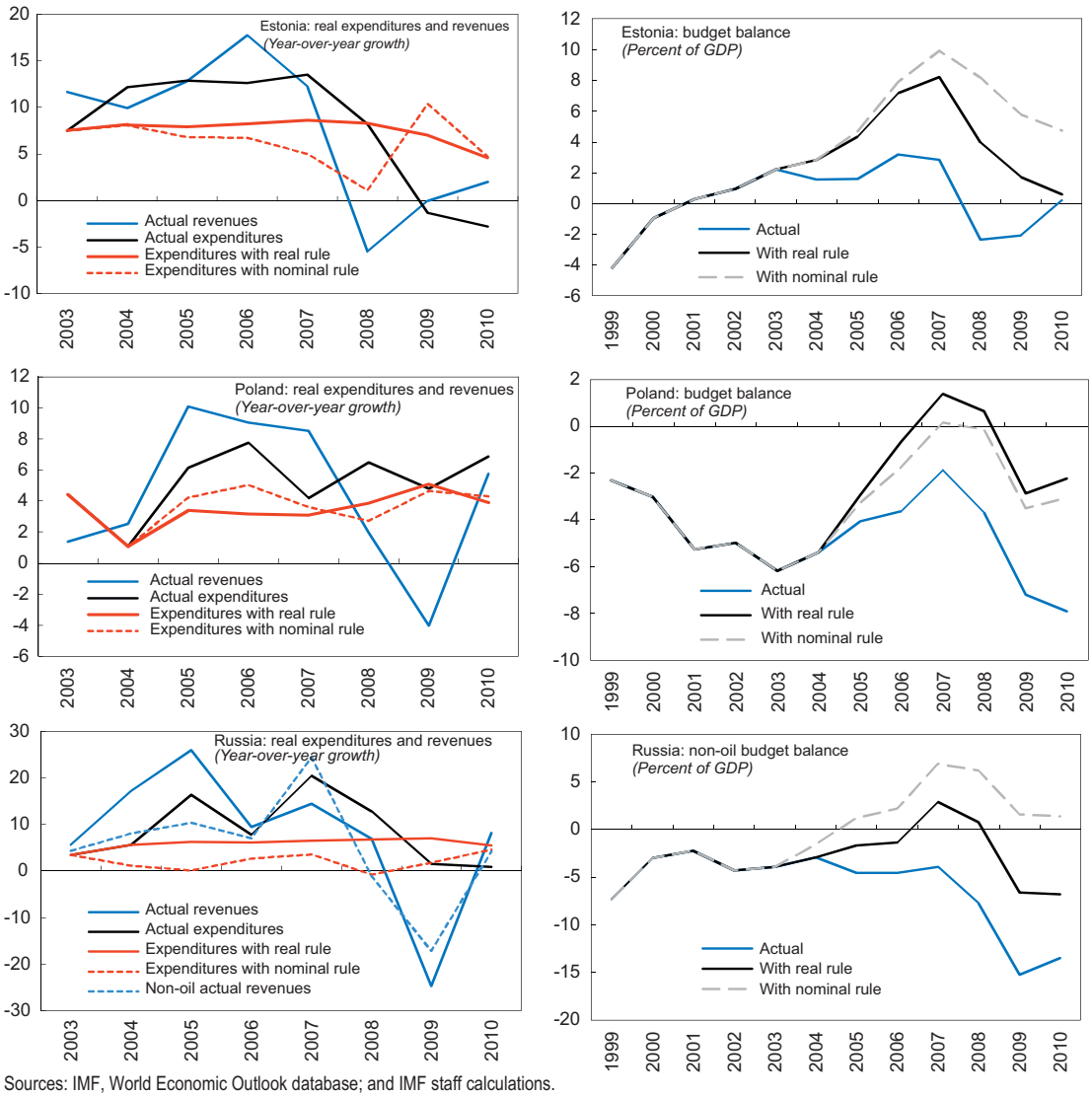
Past experience, however, shows that an expenditure rule, like other fiscal rules, only works if there is a genuine political commitment to fiscal discipline. Without that commitment, the expenditure rule risks leading to creative accounting and to off-budget operations, reducing transparency while failing to genuinely improve fiscal policy. Only superficial commitment to the expenditure rule could also undermine the quality of public spending, as easy-to-cut expenditures are targeted regardless of the implications for long-term growth.

Note: The main author of this box is Géraldine Mahieu.

[1] The expenditure rules considered in the numerical examples limit the growth rate of general government primary expenditure to a prudent estimate of medium-term real GDP growth. It is calculated as the moving average of real GDP growth since 2000 rather than potential growth, which is difficult to estimate reliably in real time. Computing average real GDP growth from 2000 excludes the transition years, where growth was arguably less representative of future economic performance. The simulations consider two variations of the expenditure rule. In the first version, real spending is targeted using the actual CPI to translate real expenditure ceilings into nominal ones. In the second version, nominal spending is targeted using the targeted inflation rate to derive nominal expenditure ceilings. For expositional clarity, any feedbacks from expenditure on real GDP growth and public revenues are assumed away. The simulations generally apply the expenditure rule from 2004. However, later starting points are used in a number of cases to ensure that public finances are reasonably sound at the outset (2005 for the Czech Republic, Hungary, Poland, and Slovakia, and 2006 in Albania, Croatia, and Turkey).

Box 2.1 *(continued)*

Impact of an Expenditure Rule on Expenditure and Revenue Growth in Selected EU Countries

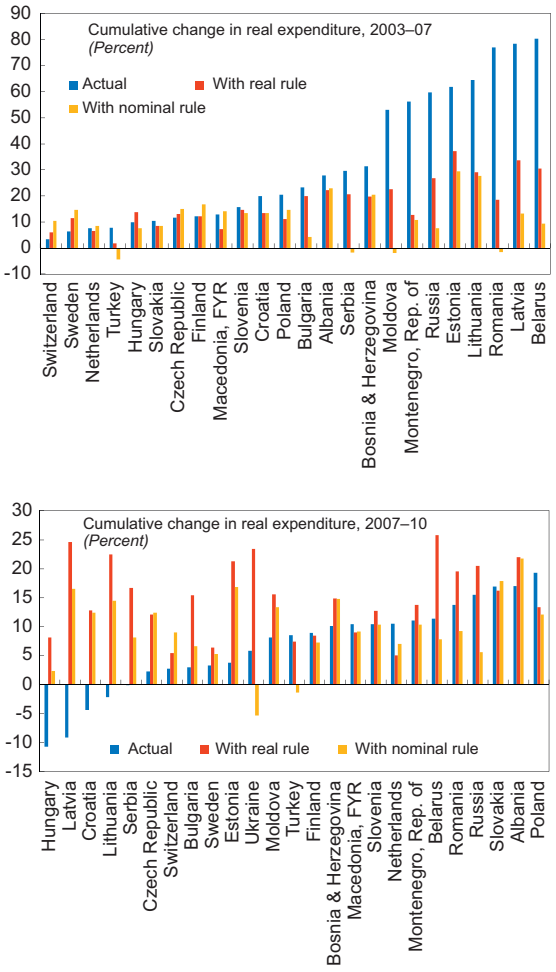


Sources: IMF, World Economic Outlook database; and IMF staff calculations.

Expenditure rules should be supplemented by a long-term fiscal anchor for the budget balance. Expenditure rules by themselves do not ensure fiscal sustainability as they do not take the revenue side into account.[2] A long-term fiscal anchor, in terms of budget balance, is therefore essential, either by linking the path of expenditures to the desired fiscal balance or by combining the expenditure rule with a budget balance rule or a deficit ceiling, to avoid excessive fiscal slippages in case of severe economic crises. The case of Latvia illustrates this point in the numerical simulations (third figure): despite Latvia's large fiscal buffers induced by the expenditure rule during the boom years (peaking at 9.5 percent of GDP in 2007 with a real rule), maintaining an expenditure growth rate in line with past average GDP growth (about 7 percent in real terms) when GDP collapsed by about 22 percent in the following three years would have led to excessive fiscal deficits (–9.5 percent in 2010).

[2] However, some expenditure rules provide for compensatory cuts in spending in case of discretionary cuts in revenues.

Expenditure Rule and Its Impact on Expenditure Growth in Good Times and Downturns

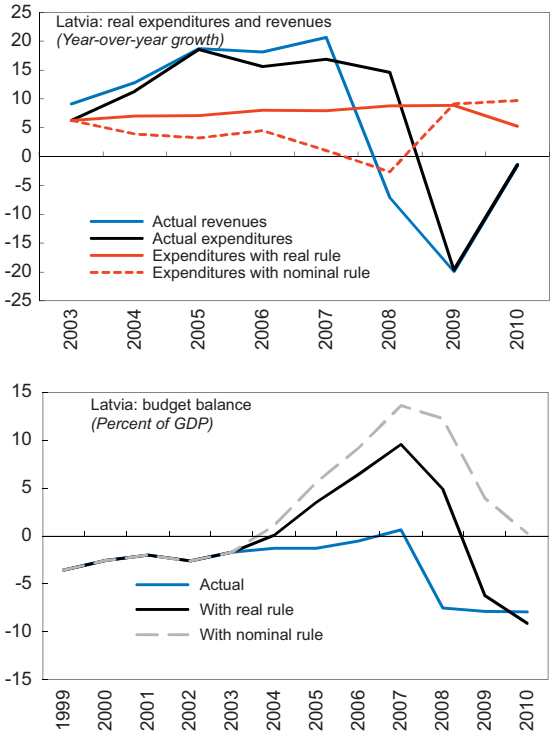


Sources: IMF, World Economic Outlook database; and IMF staff calculations.

This also implies that fiscal expenditure rules are not a good instrument for fiscal consolidation, especially in times when GDP growth is still below potential. The example of Hungary in the illustrative simulations shows that if the fiscal rule started being applied in a year with a large fiscal deficit (6.4 percent of GDP in Hungary in 2004), it worsens the fiscal deficit (fourth figure). Given that many emerging European economies are currently facing large fiscal deficits, major fiscal consolidation plans should precede the introduction of an expenditure rule. However, considering a wider set of rules, fiscal rules may be a factor of success for fiscal consolidation (IMF, 2009).

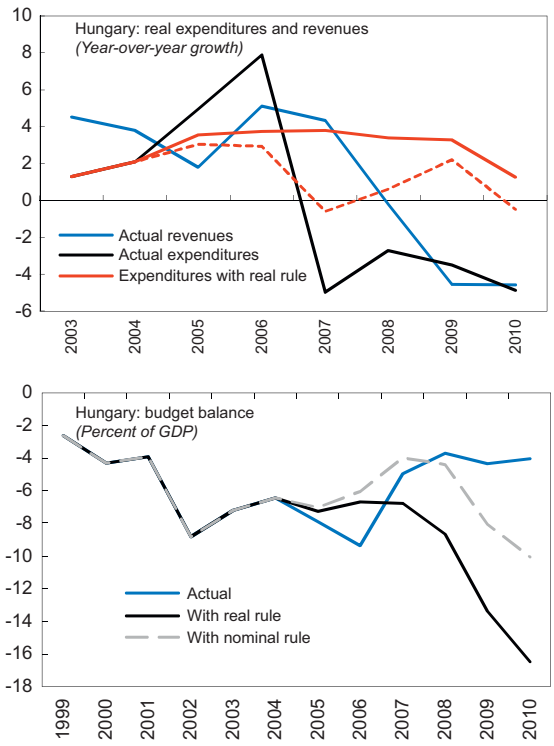
However, preparatory work on the design of an expenditure rule should commence earlier. The design of the rule and the process of reaching the necessary

Impact of Expenditure Rule in Latvia



Sources: IMF, World Economic Outlook database; and IMF staff calculations.

Impact of Expenditure Rule in Hungary



Sources: IMF, World Economic Outlook database; and IMF staff calculations.

Box 2.1 *(concluded)*

consensus on its parameters are likely to take time. In addition, because the global financial crisis has generally increased the population's awareness of the importance of stable and sustainable public finances, this could raise the political support for an expenditure rule. Past experience shows that the introduction of expenditure rules was indeed preceded by severe fiscal difficulties in several countries, although it came after consolidation efforts had been completed and therefore served primarily to lock in fiscal adjustment. This suggests that preparations for an expenditure rule should accompany fiscal consolidation plans so that it is ready for implementation once the repair of public finances has sufficiently advanced.

Box 2.2

Institutions That Facilitate Fiscal Consolidation

Budgetary institutions shape fiscal outcomes and notably facilitate fiscal consolidation. This has been shown by several theoretical and empirical analyses. Budgetary institutions support fiscal consolidation efforts at three stages of the policymaking process: (i) by providing policymakers and the public with a credible and transparent assessment of the scale and scope of the necessary consolidation; (ii) by helping develop a credible consolidation strategy; and (iii) by supporting the implementation of the consolidation strategy with strong institutional arrangements for the preparation, approval, and execution of the budget. This box reviews the institutions that seem to have contributed the most to fiscal consolidation.[1]

Comprehensive and rigorous reporting of government finances is needed to provide an effective basis for consolidation planning. This is supported by both the literature and past country experience. Government statistics should cover both central and local government finances and be produced by an independent statistical office, in line with harmonized standards.[2] Experience shows that contingent liabilities and tax expenditures (that is, deviations from established tax norms or benchmarks intended to provide a benefit for a specific activity or class of taxpayer) should be subjected to stricter monitoring and control arrangements, because these two items have been a major source of fiscal leakages in previous consolidation efforts.

Medium-term fiscal objectives can provide a stable anchor for fiscal consolidation. When precisely defined in terms of nominal values and timeframe, medium-term fiscal objectives have been shown to provide a stable anchor for fiscal consolidation and to raise the costs of deviating from the consolidation path. Formalizing these medium-term objectives as numerical fiscal rules can contribute to the consolidation efforts, although empirical studies tend to show that they have been more important in sustaining the pace of consolidation than in generating it. For example, some empirical evidence (see EC, 2007b) suggests that the presence of numerical rules for the deficit and debt is associated with successful consolidation episodes, but expenditure rules are not (see Box 2.1). Numerical rules for deficit and debt were introduced in Italy and Spain during their successful fiscal consolidations, which started in the 1990s. The enactment of subnational borrowing rules and limits also appears to have supported the major fiscal consolidation efforts in Canada (started in 1993) and Russia (started in 1995). Under the U.S. Budget Enforcement Act (1990–2002), stringent caps on discretionary spending and "pay-as-you-go" financing on entitlement outlays helped lock in the revenue surprise of the late 1990s until passage of the tax cut in 2001.[3]

Note: The main author of this box is Géraldine Mahieu.

[1] For more details on the impact of budgetary institutions on fiscal outcome and fiscal consolidation, see notably European Commission (2007b), Tsibouris and others (2006), Gupta and others (2005), Debrun and others (2009), Price (2010), and von Hagen and others (2001).

[2] Dabla-Norris and others (2010) shows that the comprehensiveness and transparency of the budget process particularly promote fiscal discipline in low-income countries.

[3] However, lower defense spending may have been a safety valve, since nondefense spending continued to grow.

A credible medium-term budget framework, if adequately designed, is also crucial to meet aggregate fiscal objectives and achieve consolidation success, as it encourages long-term planning and reinforces multi-year discipline. A medium-term framework consists of arrangements for formulating and presenting projections of individual revenue and expenditure items; fixing binding multi-year restrictions on expenditure aggregates; and providing clear indications of policy priorities. While the empirical support for the effectiveness of medium-term frameworks in promoting fiscal discipline is somewhat mixed, medium-term frameworks were implemented in several countries that have achieved large fiscal consolidation, such as in Brazil (1999–2003), Canada (1993–2000), Finland (1992–2000), Lithuania (1999–2003), New Zealand (1983–88), and South Africa (1993–2001).[4]

Independent fiscal agencies have been shown to be particularly helpful in developing credible fiscal consolidation. The role given to these agencies differs across countries. They can be tasked to do the following:

- Provide independent forecasts regarding both budgetary variables and other relevant macroeconomic variables, including GDP growth and inflation, thereby injecting more realism into budget plans, and/or
- Provide objective analysis of fiscal developments, long-term sustainability considerations, and cost of budgetary initiatives, thereby increasing the transparency and supporting the credibility of the consolidation process, and/or
- Provide normative assessments regarding the consistency of the government's budgetary policies with its own objectives (including recommendations of a particular fiscal measure), thereby raising the reputational cost to the government of deviating from its fiscal consolidation path.

Evidence suggests that fiscal councils have contributed to fiscal discipline, with those providing normative assessment generally being more effective than those limited to pure analysis (see, for instance, Debrun and others, 2009), although their effectiveness also crucially depends on the degree of the government's commitment to fiscal soundness. Examples of fiscal councils with a mandate to issue normative judgments include Belgium's High Council of Finance, Denmark's Economic Council, and Sweden's Fiscal Policy council. The recommendations of these agencies seem to have been taken seriously, contributing to constructive debates on budgetary policy issues and helping to implement difficult consolidation measures. The Netherlands' Central Planning Bureau, which provides the economic assumptions for the budget, as well as independent analyses and research on a broad range of economic issues, is also widely regarded as fully independent and as a model for an effective fiscal council.

Finally, strong institutions for the preparation, approval, and execution of budgets prevent consolidation plans from derailing when confronted with the realities of the annual budget process. A comprehensive top-down approach to budgeting—meaning that a binding decision on budget aggregates including all central government finances is taken before an allocation of expenditure is made within those aggregates—has been shown to improve fiscal discipline.[5] Similarly, restrictions on parliamentary powers to amend the government's draft budget and hand a stronger role to the prime minister or finance minister have proven to help enhance fiscal discipline.[6]

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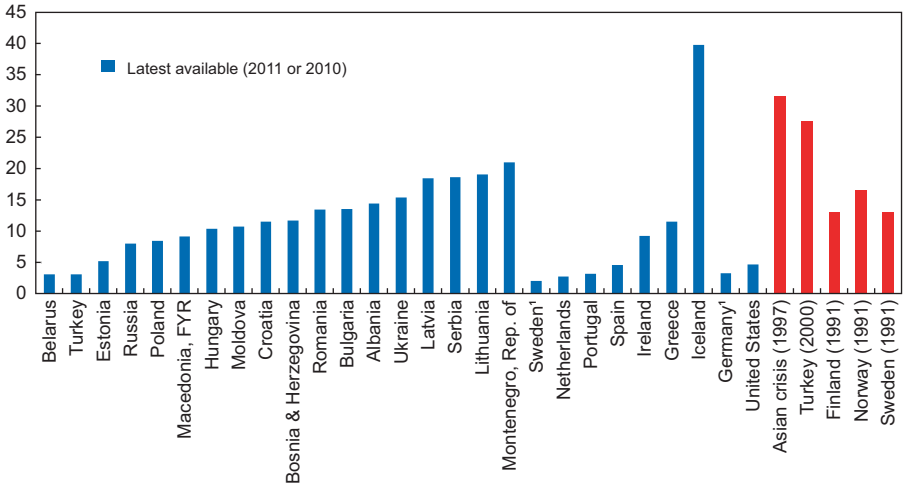
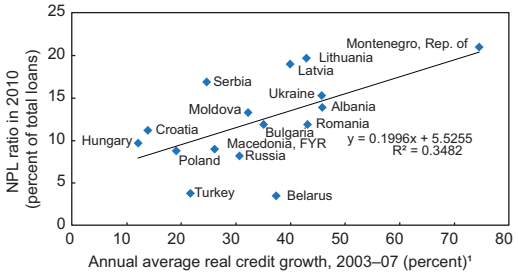
[4] The EC (2007b) finds that medium-term frameworks have a positive effect on fiscal performance in the EU as do Beetsma and others (2009), while Ylaoutinen (2004) finds less evidence of such a link in Central and Eastern European countries.
[5] Von Hagen (2005) and de Haan and others (1999) find support for the hypothesis that the comprehensiveness of the budget process improves fiscal discipline.
[6] Alesina and others (1999), Wehner (2009), and von Hagen and Harden (1994) notably demonstrate that limits on parliamentary amendment powers are positively associated with fiscal outcomes. Mulas-Granados and others (2009) shows that institutional designs that allow the finance minister to veto parliament's proposals for modifying the budget have been crucial to foster fiscal consolidation in the new EU Member States.

Figure 2.13
Selected Countries: Bank Nonperforming Loans to Total Loans
(Percent)



Sources: Iceland FME; IMF, Statistics Department; and Laeven and Valencia (2008).
[1]2009 instead of 2010.

Figure 2.14
Emerging Europe: NPL Levels and Past Credit Growth



Sources: IMF, *International Financial Statistics;* IMF, Statistics Department; and IMF staff estimates.
Note: Annual average growth is over 2004–07 for Hungary, Latvia, Macedonia, and Serbia; 2005–07 for Belarus, Lithuania, and Poland; and 2006–07 for Moldova.
[1]Derived from stock data in domestic currency, adjusted by CPI inflation. May include valuation effects from foreign-currency-denominated loans.

Fiscal responsibility legislation was approved in Serbia at end-2010. Bulgaria recently adopted a Financial Stability Pact, which caps government expenditure at 40 percent of GDP and the general government budget deficit at no more than 2 percent of GDP.

…but fiscal rules are no panacea

A genuine political commitment to fiscal discipline is key to success. In the absence of social consensus on fiscal discipline, fiscal institutions are likely to be ignored or circumvented—typically through creative accounting and off-budget operations that reduce transparency and democratic accountability. But even when an expenditure rule is not fully followed, having one can help limit expenditure growth by setting a clear benchmark for reasonable expenditure growth in good times. In emerging Europe, the crisis in 2008/09 has generally increased the popular awareness of the importance of sustainable public finances, which could help build support for introducing an expenditure rule.

Cleaning up NPLs

The crisis of 2008/09 and the boom that preceded it have left a large share of banks' loan portfolios impaired. NPL ratios are high, often at levels comparable with those seen in earlier financial crises around the world (Figure 2.13). According to the latest data available, several countries, including Latvia, Lithuania, Montenegro, Serbia, and Ukraine, report NPL ratios in excess of 15 percent (Table 2.4). NPL ratios are particularly high in countries that went through a pronounced boom-bust cycle, with rapid credit growth and housing price appreciation fueling the upswing and deep recessions and housing price slumps when the credit cycle turned (Figure 2.14). NPL ratios generally seem close to their peak in the first half

Table 2.4

Emerging Europe: Selected Financial Soundness Indicators, 2007–11[1]

(Percent)

	Capital Adequacy						Return on Assets						Nonperforming Loans to Total Loans					
Country	**2007**	**2008**	**2009**	**2010**	**2011**	**Latest**	**2007**	**2008**	**2009**	**2010**	**2011**	**Latest**	**2007**	**2008**	**2009**	**2010**	**2011**	**Latest**
Albania	17.1	17.2	16.2	15.4	14.8	Mar.	1.6	0.9	0.4	0.7	0.3	Mar.	3.4	6.6	10.5	13.9	14.4	Mar.
Belarus	19.3	21.8	19.8	20.5	16.7	June	1.7	1.4	1.4	1.7	1.6	June	1.9	1.7	4.2	3.5	3.1	June
Bosnia and Herzegovina	17.1	16.3	16.1	16.2	15.8	Mar.	0.9	0.4	0.1	-0.6	0.2	Mar.	3.0	3.1	5.9	11.4	11.7	Mar.
Bulgaria	13.8	14.9	17.0	17.5	17.7	June	2.4	2.1	1.1	0.9	0.9	June	2.1	2.5	6.4	11.9	13.5	June
Croatia	16.9	15.4	16.6	18.8	19.1	Mar.	1.6	1.6	1.1	1.2	1.2	Mar.	4.8	4.9	7.8	11.2	11.5	Mar.
Hungary	10.4	12.4	13.9	14.1	14.4	Mar.	1.2	1.2	0.6	0.1	0.7	Mar.	2.3	3.0	6.7	9.7	10.4	Mar.
Latvia	11.1	11.8	14.6	14.6	15.1	June	2.0	0.3	-3.5	-1.6	0.6	June	0.8	3.6	16.4	19.0	18.4	June
Lithuania	10.9	12.9	14.2	15.6	15.6	Mar.	1.7	1.0	-4.2	-0.3	1.3	Mar.	1.0	4.6	19.3	19.7	19.1	Mar.
Macedonia, FYR	17.0	16.2	16.4	16.1	16.8	Mar.	1.8	1.4	0.6	0.8	-0.1	Mar.	7.5	6.7	8.9	9.0	9.1	Mar.
Moldova	29.1	32.2	32.1	30.1	29.7	Mar.	3.9	3.5	-0.5	0.5	1.7	Mar.	3.7	5.2	16.4	13.3	10.7	Mar.
Montenegro, Rep. of	17.1	15.0	15.8	15.9	…	Dec.	0.8	-0.6	-0.6	-2.7	-3.0	Mar.	3.2	7.2	13.5	21.0	…	Dec.
Poland	12.0	11.2	13.3	13.8	13.7	June	1.9	1.5	0.8	1.0	1.1	Mar.	5.2	4.5	8.0	8.8	8.4	June
Romania	13.8	13.8	14.7	14.7	14.2	June	1.0	1.6	0.2	-0.1	0.1	June	2.6	2.8	7.9	11.9	13.4	June
Russia	15.5	16.8	20.9	18.1	17.2	May	3.0	1.8	0.7	1.9	2.3	May	2.5	3.8	9.5	8.2	8.0	May
Serbia	27.9	21.9	21.3	19.9	19.7	June	1.7	2.1	1.0	1.1	1.4	June	…	11.3	15.5	16.9	18.6	June
Turkey	18.9	18.0	20.6	19.0	17.4	May	2.6	1.8	2.4	2.2	1.8	May	3.6	3.8	5.6	3.8	3.1	May
Ukraine	13.9	14.0	18.1	20.8	19.2	June	1.5	1.0	-4.4	-1.5	-0.2	June	3.0	3.9	13.7	15.3	15.4	June
Memorandum																		
Middle East[2]	14.8	13.9	14.9	16.7	17.8		1.7	1.5	1.3	1.4	1.7		5.6	4.4	5.2	5.1	4.5	
Latin America[3]	15.9	15.7	17.1	16.7	16.4		2.5	1.9	2.2	2.7	2.4		2.4	2.7	3.4	2.5	2.4	
Asia[4]	14.2	14.5	15.3	15.6	15.6		1.3	1.3	1.3	1.5	2.0		5.5	3.8	3.4	2.9	2.6	

Source: IMF, Statistics Department.

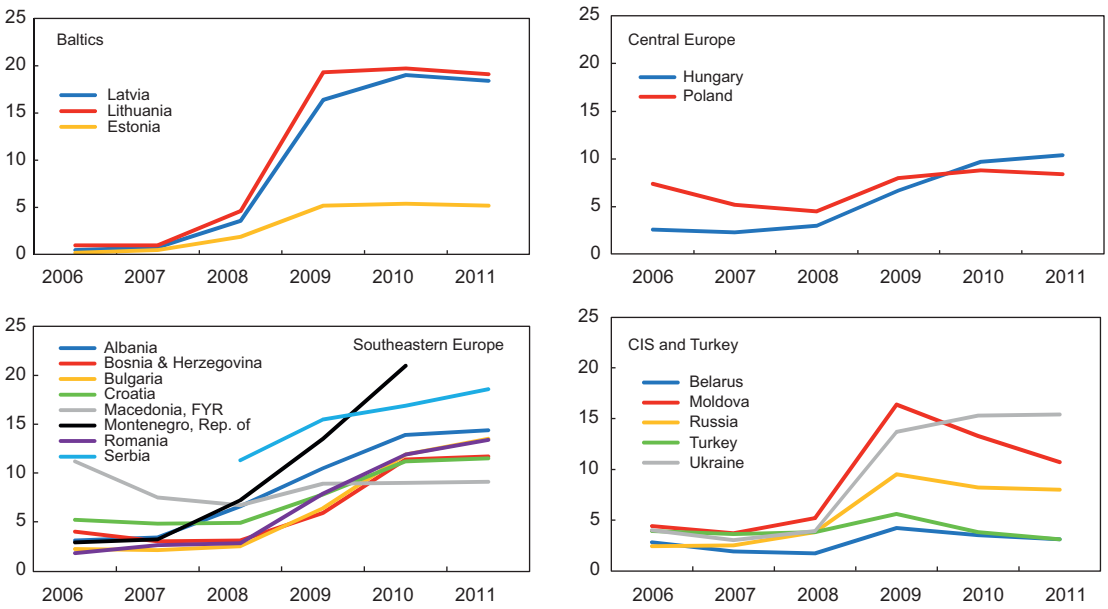
[1] Please refer to http://fsi.imf.org/fsitables.aspx for detailed notes on cross-country variations in the definitions of the variables.

[2] Average for Jordan, Lebanon, Morocco, Oman, and United Arab Emirates.

[3] Average for Argentina, Brazil, Chile, Colombia, and Mexico.

[4] Average for China, India, Indonesia, Malaysia, Philippines, and Thailand.

Figure 2.15
Emerging Europe: Bank Nonperforming Loans to Total Loans, 2006–11
(Percent, end of period or latest)



Source: IMF, Statistics Department.

of 2011—with ratios declining in some countries, such as Poland, Russia, and the Baltics, while edging up elsewhere, such as in Bulgaria, Hungary, and Romania (Figure 2.15). This reflects differences in the strength of the economic recovery. Exchange rate movements also play a role when loans are denominated in foreign currency. For example, in Hungary, many mortgages are denominated in Swiss francs and the franc's strong appreciation against the forint makes it more onerous for homeowners to keep up with rising debt-service requirements.

High NPLs in emerging Europe are currently not a threat to financial stability…

Financial soundness indicators suggest that banking systems are generally well capitalized and that provisioning levels are generally substantial (Table 2.4). Capital adequacy ratios are in the double digits, comfortably above the minimum regulatory requirement. Loan-loss provisions cover about two-thirds of NPLs on average; but provisioning levels vary significantly across countries, with the levels in some Southeastern European countries closer to one-third of NPLs (Figure 2.16).[5]

Nonetheless, supervisors must remain on their toes as the financial turmoil in euro area debt markets evolves and further local surprises cannot be ruled out, such as the need for a bailout of the fifth largest Russian bank this July.

...but they may hold back the recovery

High levels of unresolved NPLs over prolonged periods of time are likely to hold back economic recovery and structural change for the following reasons.

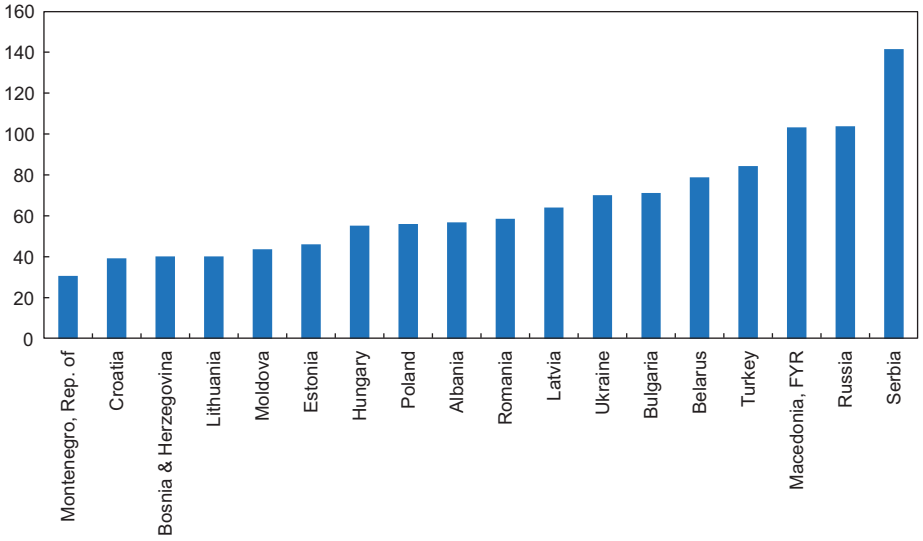
- Impaired debtors have little incentive and ability to step up economic activity as any incremental income would accrue in its entirety to creditors.

[5] The recent European stress tests found that most major banks operating in the region would be resilient to an adverse scenario: only two banks (Volksbank and Eurobank) failed the tests and two other banks (Piraeus and Banco Commercial Portugues) were found to be vulnerable to shocks (Figure 2.17).

Figure 2.16

Emerging Europe: Bank Provisions for Nonperforming Loans, 2010–11[1]

(Percent)



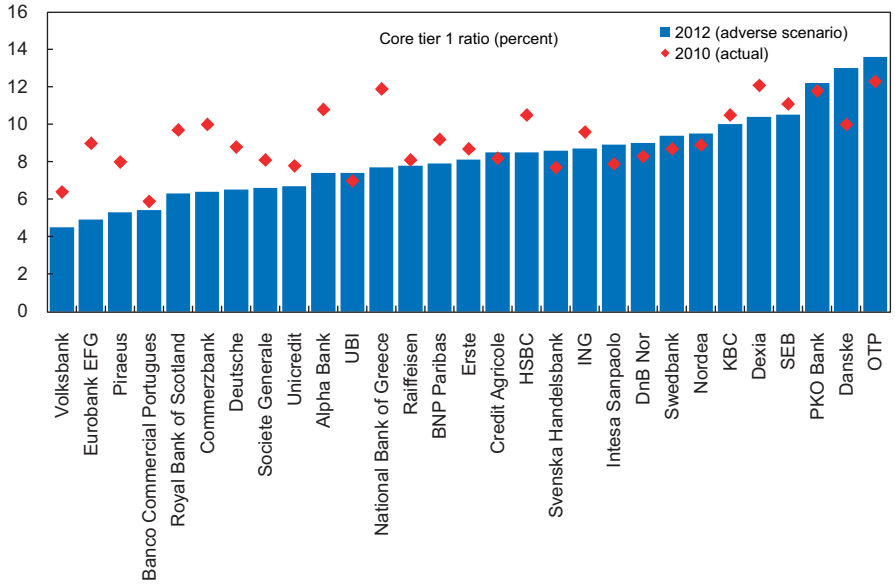
Source: IMF, Statistics Department.

[1]Latest available.

Figure 2.17

Selected Banks in Emerging Europe: European Bank Stress Tests[1]

(Results from stress tests, July 2011)



Source: European Banking Authority (EBA).

[1]The EBA stress tests simulated bank profits over a two-year period under an adverse macrofinancial scenario, based on end-2010 balance sheet data. Banks failed the test if their core tier 1 capital ratio was below 5 percent at the end of the simulation period and were deemed vulnerableif their ratio was between 5 and 6 percent. The capital ratio at the end of the simulation period took into account recognized mitigating measures (including capital raising) put in place before April 30, 2011.

At the same time, lack of financing hinders investment, as well as the conduct of normal business operations. Moreover, unresolved NPLs also mean that assets of unviable debtors are not reallocated to potentially more productive uses.

- Banks with highly impaired loan portfolios are likely to engage less in new lending. First, banks with high NPLs are likely to charge higher interest rates, and therefore attract less credit demand, as they raise spreads to recoup NPL-related losses or as they pass on higher funding costs associated with uncertainties about their true financial health. Second, high NPLs can reduce banks' capacity to finance new loans, as foregone debt service on NPLs is no longer available for new lending or as losses from provisioning erode capital. Third, high NPLs might unduly distract bank management from seeking out new lending opportunities.

A cross-country panel regression analysis of individual banks in emerging Europe shows that banks with high NPLs exhibit systematically lower lending growth (Box 2.3). As the regressions compare individual banks, they allow supply factors (higher NPLs) to be distinguished from demand factors (low GDP growth), which affect all banks in a country equally.

Resolving NPLs should be done by the private sector

Lowering NPL levels will support economic activity. With economic conditions sufficiently settled for a proper assessment of debtors' repayment capacity and banking systems resilient enough to absorb potential further losses, the time has come to push ahead with NPL resolution. There are a number of steps governments can take to foster market-based solutions.

- *Remove debt restructuring obstacles in tax codes and regulations.* A reduction of debt through debt write-downs should not be considered taxable income of troubled borrowers. Loss carry-forward should be ensured in restructurings that involve mergers or acquisitions, and the transfer of assets to third parties or dedicated workout units should not be subject to value-added tax (VAT). Regulations prohibiting banks from owning and operating businesses or requiring compulsory takeover bids should not apply in the context of debt restructuring or collateral execution.
- *Strengthen credit enforcement.* Effective credit enforcement requires not only adequate insolvency and foreclosure legislation, but also the institutional capacity and integrity for implementation.
- *Foster voluntary out-of-court restructurings.* This could be done by drawing up a code of conduct for voluntary restructuring that is endorsed by the authorities and industry associations. It could be supported further by expedited legal proceedings that make agreements reached by a qualified majority of creditors legally binding, including for dissenting creditors.
- *Avoid coercive debt restructuring and government subsidies.* Coercion would give rise to legal challenge and do lasting damage to the credit culture. Government subsidies could increase moral hazard and could redistribute to creditors who would otherwise be able to absorb losses. These measures should be used when debt overhang is widespread and severe; the capacity of the banking system to restructure is limited; and there are important concerns about financial stability (Laeven and Laryea, 2009)—none of which is currently the case in emerging Europe.

Toward Sustainable Convergence with Advanced Europe

The still large income differentials between advanced and emerging Europe suggest that emerging Europe has significant scope for further catching-up. At the same time, as discussed in Chapter 3, Europe is the only continent where

Box 2.3

Nonperforming Loans (NPLs) and Credit Growth in Emerging Europe

Credit growth remains subdued in much of emerging Europe while NPLs are high (Figures 2.3 and 2.15). Almost three years after the peak phase of the global financial crisis, real credit growth is still negative in half the countries of emerging Europe. Elsewhere, it also often remains rather low. While this likely reflects a variety of factors, including better risk awareness at the bank level, and is welcome to some extent, the rapid increase of NPLs on banks' books and the large number of overextended borrowers that it reflects may also play a role. Resolving these NPLs would likely not only spur credit growth, but also increase credit churning and unleash the economic potential of overextended but viable borrowers. Economic recovery would benefit through all three channels.

Empirical analysis of individual bank data suggests that high NPLs are indeed holding back credit growth in emerging Europe (table). Specifically, the logarithm of NPL ratios is regressed on real loan growth using 2010 data for over 900 banks in 21 countries of the region. Country-specific effects and cross-country growth differentials are controlled for, as they are potentially the most important other drivers of credit growth. The coefficient for NPLs is found to be negative and highly significant. Results are reported with and without banks' capital adequacy as additional control. A doubling of the NPL ratio tends to reduce real credit growth by between 7 percentage points and 10 percentage points. Working with individual bank data and controlling for GDP growth has the advantage of stripping out the effects that cross-country idiosyncrasies, such as the strength of credit demand, have on lending growth. Hence, the estimated coefficient for NPLs should predominantly capture the effects of NPLs on credit supply.

Regression Results for Banks' Real Loan Growth in 2010

Explanatory variables[1]	Coefficients	
Log NPL ratio (percent, 2010)	-7.100	-9.588
	(0.000)	(0.000)
Real GDP growth (percent, 2010)	1.689	1.283
	(0.120)	(0.197)
Fitch Core Capital/RWA (percent, 2010)	—	0.372
	—	(0.034)
Constant	11.902	14.632
	(0.148)	(0.070)
Observations	959	81
R-squared	0.120	0.460

Sources: IMF, World Economic Outlook database; Bankscope; and IMF staff calculations.
Note: Countries included: emerging Europe (Albania, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Hungary, Latvia, Lithuania, Macedonia, Moldova, Montenegro, Poland, Romania, Russia, Serbia, Turkey, and Ukraine) and the Czech Republic, Estonia, the Slovak Republic, and Slovenia. *p*-values in parenthesis.
[1] Country dummies not shown.

Note: The main authors of this box are Gregorio Impavido and Yan Sun.

strong convergence is visibly occurring, no doubt helped by strong linkages between advanced and emerging Europe (Chapter 4). However, convergence is not automatic, as is evident from countries where convergence has stalled, and some growth patterns are more conducive to sustain catching-up than others.

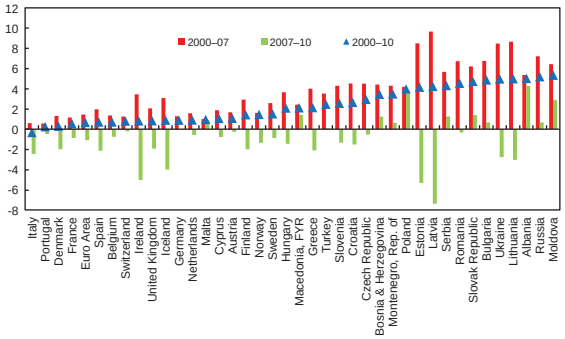
The experience of the past decade suggests that countries with sound macroeconomic policies and rapid trade integration with advanced Europe have seen faster catching-up than countries that have remained relatively closed. One reason for this may be that adopting foreign technology is easier for countries that trade heavily than for countries that are less integrated with the global economy. Indeed, countries with more economic activity in manufacturing and less in nontradable sectors tend to have higher total factor productivity (TFP) growth in the longer term. Another reason for the difference may be that in countries that remain less integrated, much of the growth tends to occur in the context of demand booms financed by capital inflows. While the countries that saw large capital inflows experienced rapid growth during the boom years, much of this overperformance was undone during the subsequent bust.

As discussed in Chapter 3, the interaction of sound macroeconomic policies and growth-enhancing structural reforms can, over time, make a significant difference in raising a country's growth potential by fostering balanced growth and raising TFP growth. Good macroeconomic policies help prevent unbalanced growth, and structural reforms further help raise TFP growth, which in the longer term is the key contributor to growth.

3. Long-Term Growth Differentials within Europe

In the past decade, growth rates in GDP per capita have differed markedly among European countries, from zero in Italy and Portugal to more than 4 percent in the best performers. To a large extent, the growth differentials reflect convergence. However, a number of countries have grown less than their potential because of poor macroeconomic policies and barriers to growth. The experience of earlier reformers provides useful lessons for current poor performers. Reforms do make a difference, but their implementation takes time, and their impact is felt only with a lag. Reforms would not only speed up convergence within Europe, but also help close the productivity and innovation gaps with the United States.

Figure 3.1
European Countries: Change in Real GDP Per Capita, 2000–10
(Annualized percent)



Sources: IMF, World Economic Outlook database; and IMF staff calculations.

Growth Differentials in Europe

Across Europe, countries have experienced a wide variation in per capita GDP growth over the past decade (Figure 3.1).[6] Growth rates have ranged from close to zero in Italy and Portugal to more than 4 percent in Albania, Estonia, Latvia, Lithuania, Moldova, Russia, and Ukraine.

Convergence explains a large part of these differences…

Poorer European countries have generally grown faster than richer countries, a process called "convergence." While there is no clear evidence of *absolute* convergence in the world, convergence is usually observed within more homogeneous groups of economies—a phenomenon called *conditional* convergence.[7,8] It is noteworthy that convergence in Europe has been stronger than in Latin America or Asia—regions that are not as economically integrated (Figure 3.2). Much of the convergence in Europe is due to rapid growth of emerging European countries, as they have adopted institutions similar to those in advanced Europe and benefited from higher investment rates, financed with intra-European capital flows.[9]

Growth theory identifies two factors that drive convergence: diminishing returns in the accumulation of capital and cross-country knowledge spillovers. Poorer countries usually have a lower capital stock and therefore, a higher

Note: The main authors of this chapter are Gregorio Impavido, Géraldine Mahieu, and Yan Sun.

[6] The chapter focuses on the period since the introduction of the euro. The limited number of observations and the impact of the global crisis in the latter part of the decade make it difficult to apply advanced econometric methods. Nevertheless, the findings in this chapter are similar to those found in the economics literature.

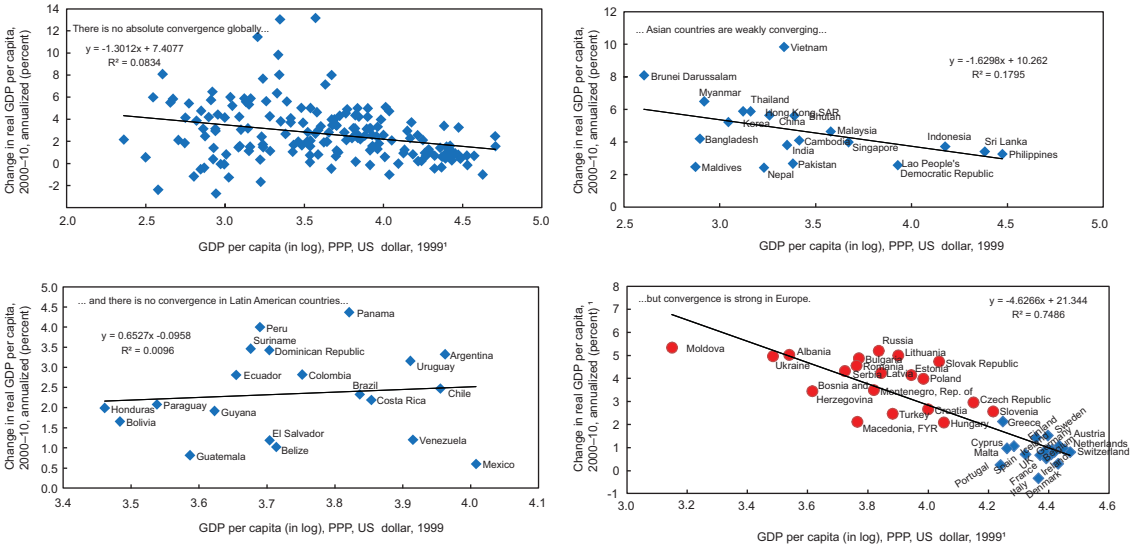
[7] See, for instance, Barro and Sala-i-Martin (2004) and Aghion and Howitt (2009).

[8] Conditional convergence predicts that countries converge to their own steady state where growth rates are only determined by technological progress. If countries share the same technology and fundamentals, they share the same steady state, so differences in per capita GDP will tend to disappear over time (Aghion and Howitt, 2009).

[9] Three advanced economies, which until 2008 (Slovenia) or 2009 (the Czech and Slovak Republics) were classified as emerging markets, have been included in this chapter among the emerging markets, reflecting their classification during most of the decade.

Figure 3.2

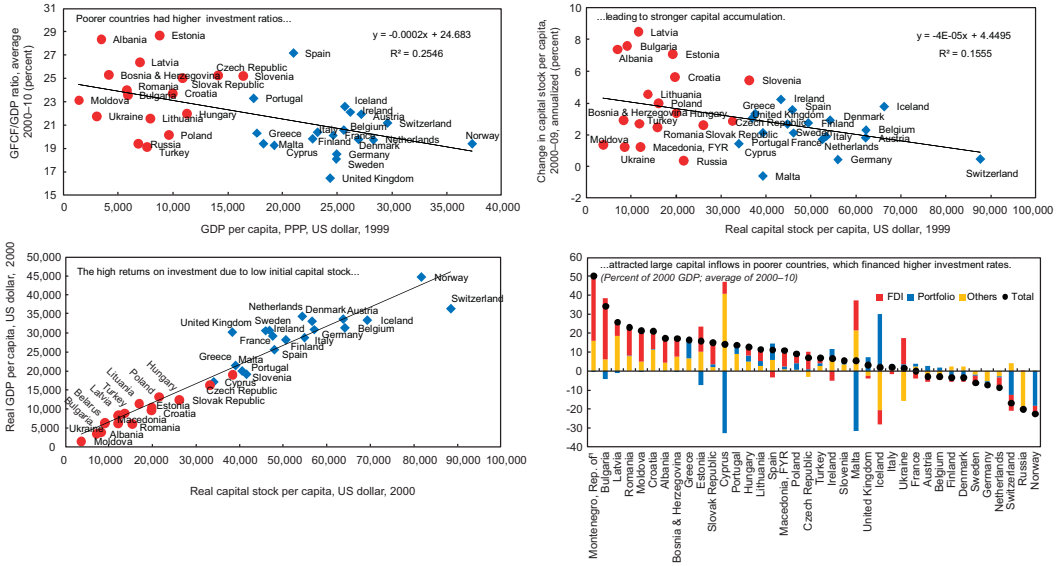
Convergence in the Three Global Regions, 2000–10



Source: IMF, World Economic Outlook database.
¹Data for Montenegro and Malta are for 2000.

Figure 3.3

European Countries: Contribution to GDP Growth of Investment and Capital Flows, 2000–10

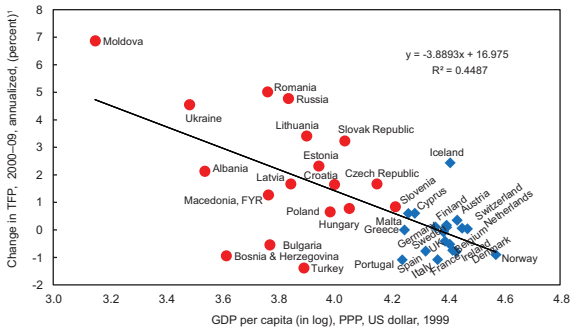


Sources: IMF, World Economic Outlook database; IMF staff calculations; and Penn Tables.
¹In percent of 2003 GDP; average of 2003–10.

marginal productivity of capital: increases in capital stock will thus have a large impact on output. Poorer countries can also boost output by imitating technologies already developed in richer and more advanced countries—a process that will raise total factor productivity (TFP).

Developments in the past decade have been in line with what the theory suggests: higher growth in poorer countries was the result of both faster capital accumulation and higher TFP growth. Higher returns on investment attracted strong capital flows, which financed higher investment rates and a more rapid accumulation of capital stock than in richer countries (Figure 3.3). In addition, poorer countries, facilitated by the EU enlargement process, achieved higher TFP

Figure 3.4
European Countries: Change in TFP Relative to Per Capita GDP, 2000–09



Sources: Conference Board Total Economy Database, January 2011; and IMF, World Economic Outlook database.
¹Data for Emerging Europe are for 2000–08.

growth by adopting new technologies and better institutions (Figure 3.4).

By contrast, the contribution of employment and human capital to average GDP growth has been lower in emerging Europe than in advanced Europe (Figures 3.5 and 3.6).[10] The lower contribution of employment growth in emerging Europe during the period was most likely related to the slower growth of its working-age population, which, in turn, was exacerbated by the emigration of workers to advanced Europe.

…but institutions and policies are equally important

Growth differentials have been more variable than convergence alone can account for. Figure 3.7 shows "adjusted" growth rates—the difference between each country's actual growth rate and the growth rate that would have been expected given initial income levels. While the precise figures are sensitive to the shape of the expected convergence line, it is clear that considerable differences exist and that some countries have done much better (and others much worse) than what would be expected on the basis of income differentials alone. For instance, Italy and Portugal have grown much slower than expected, while the Slovak Republic and Sweden have grown faster.

These growth gaps are associated with key differences in factors such as market structures, human capital stocks, institutions, and macroeconomic policies. The economic literature has identified a large number of factors likely to influence economic growth (Box 3.1). Select factors, discussed below, seem particularly relevant in differentiating fast-growing from slow-growing countries in Europe.

The importance of these factors differs across countries. The growth bottlenecks in countries that are catching up differ from those in countries that are at the technology frontier. For instance, policies promoting macroeconomic stability, flexible labor markets, and a well-educated workforce help growth in both sets of countries. Policies strengthening product market competition, better protection of property rights and legal security, and more innovation appear particularly growth enhancing for countries closer to the technology frontier (Aghion and Howitt, 2009). Finally, early economic liberalization policies during the transition process seem more important for imitating countries.[11]

Good macroeconomic policies matter

The economic literature suggests that macroeconomic volatility is not good for growth. Empirical studies have shown that countries with higher macroeconomic volatility have lower average growth (Ramey and Ramey, 1995). This may be because higher volatility discourages long-term investments that bring substantial returns only over the long term (such as investments in research and

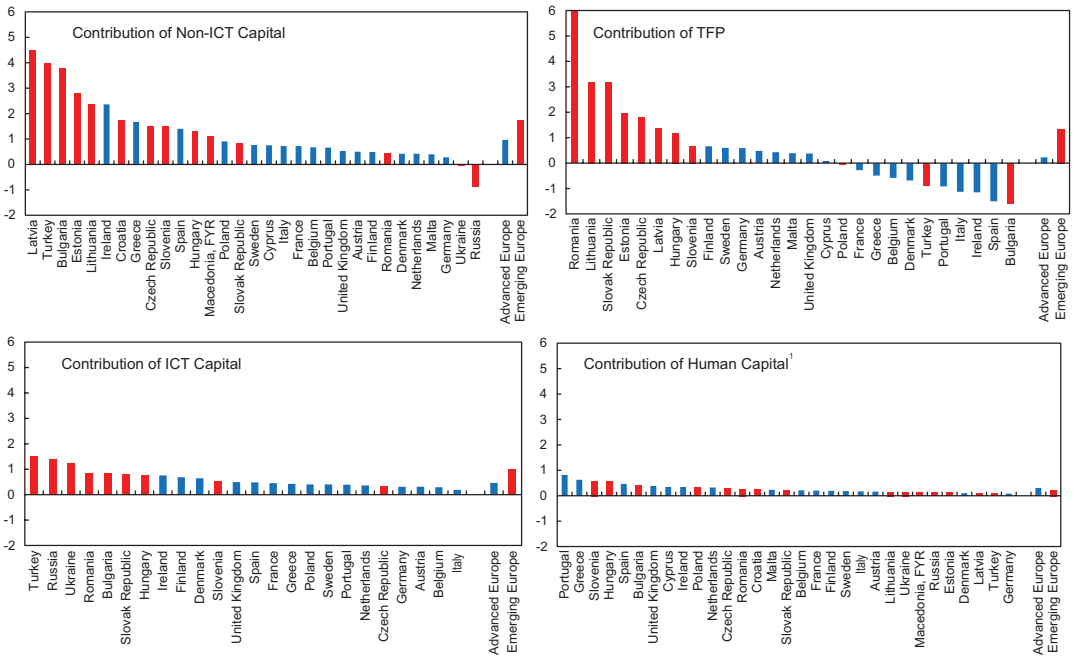
[10] The lower employment growth in emerging Europe was partly compensated for by longer hours worked.

[11] Catching-up countries will typically not focus on innovations and inventing new technologies, and instead, rely on the adoption and imitation of techniques developed outside.

Figure 3.5

Europe: Contribution to Growth of Output Per Hour Worked

(Annualized average rate, 2000–08, percentage points)



Sources: Conference Board Total Economy Database, January 2011; and IMF staff calculations.

[1]This reflects the change in the composition of labor measured on the basis of weighted measures of different skill-level groups in the labor force.

development [R&D]), especially among credit-constrained firms.[12]

Macroeconomic policies that prevent boom-bust cycles may therefore help raise long-term growth. Some of the countries in emerging Europe saw rapid growth in the run-up to the global crisis, as large capital inflows fueled a credit-driven domestic demand boom. That boom was followed by very deep recessions and generally resulted in slower convergence. For instance, if Estonia and Latvia had avoided the boom-bust cycle and maintained the average growth rates they achieved during the 1993–2005 period, their real GDP per capita in 2010 would have been 40 percent higher.

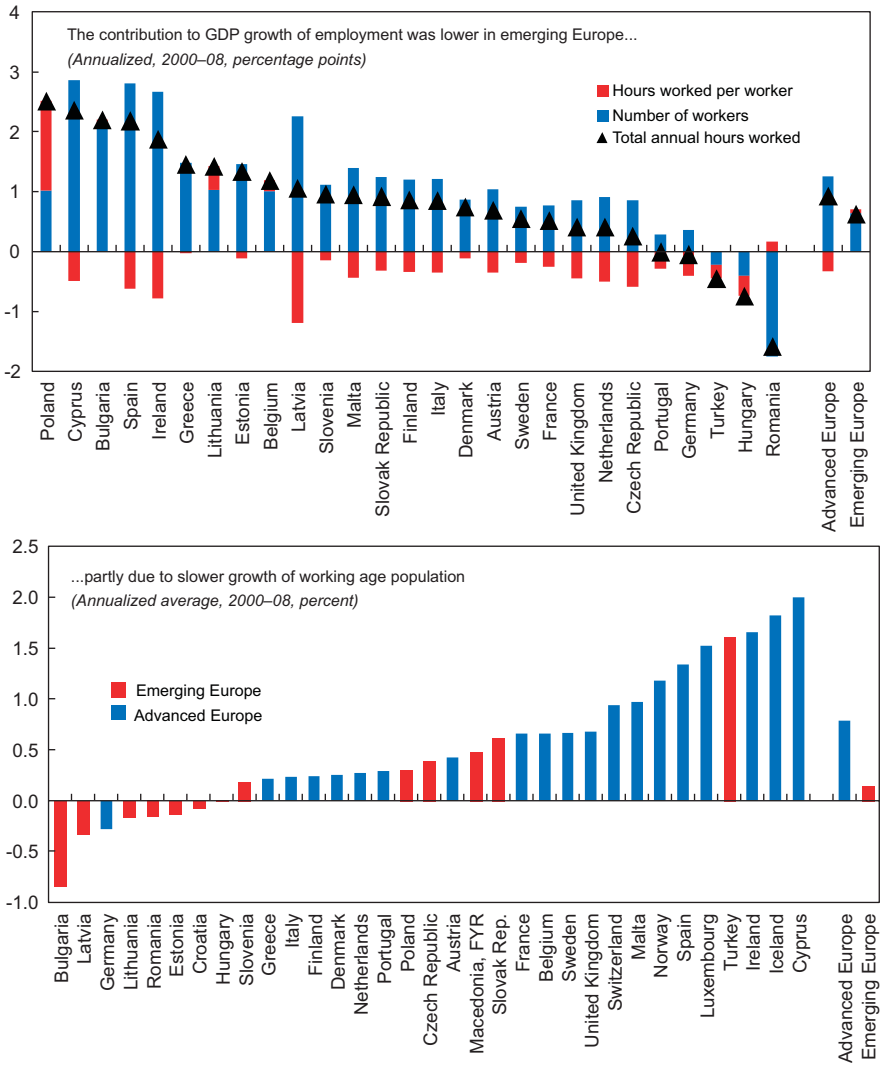
More generally, excessive growth in domestic demand may be detrimental to long-term growth (Figure 3.8). This is because it encourages a transfer of resources from the tradable to the less productive nontradable sector. In slow-growing countries, excessive domestic demand growth led to a surge in unit labor costs, notably in the manufacturing sector, and to less investment in the tradable sector. The loss in competitiveness increased further the current-account deficit, which was already boosted by higher imports that, in turn, were reducing GDP growth.[13]

Fiscal policy also matters. For instance, countries with high public debt have seen lower growth

[12] The literature also suggests that less-developed economies tend to go through a period of low and highly variable growth in the early stages of development. This is because the inability to diversify risks causes agents to invest in safer but inferior technologies in order to reduce risk. As a result, growth tends to be low and more dependent on the random outcome of a few existing activities (Acemoglu and Zilibotti, 1997).

[13] Empirical growth literature also finds a strong negative correlation between inflation, inflation volatility (even after controlling for the level of inflation), excessive credit growth, and growth. For our sample, we find a relatively weak negative relationship of these variables with growth (after adjusting for convergence). The weak correlation between growth and inflation could partly be due to the low variability of inflation among European countries, many of which share a common monetary policy.

Figure 3.6
Europe: Contribution to Growth of Employment, 2000–08



Sources: Conference Board Total Economy Database, January 2011; and Eurostat.
Note: Data for working age population for Croatia are 2002–10, for Iceland 2003–10, and for Macedonia, FYR and Turkey 2006–10.

(Figure 3.9), although the causality may run both ways. In addition, it is likely that higher corporate tax rates discourage investment by making it less profitable, causing corporations to shift investment to other countries with lower tax rates.[14] It is noteworthy that countries with lower corporate tax rates had higher investment-to-GDP ratios and attracted larger capital inflows (Figure 3.10).

[14] Higher tax rates also reduce retained earnings—a major source of financing for investment, particularly in smaller firms.

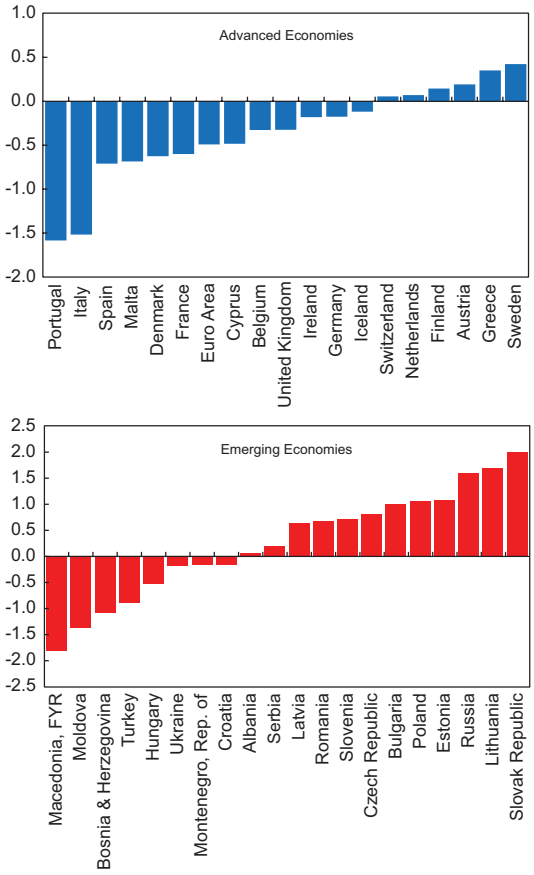
Labor market flexibility matters…

Higher labor market flexibility boosts growth by increasing labor participation and employment and better matching wage and productivity growth. In countries such as Italy, Portugal, and Spain, more rigid employment regulations (regarding dismissal of employees, collective dismissals, and temporary contracts) and hiring and firing practices may have contributed to lower participation and employment rates, particularly among women (Figure 3.11). In addition, they have likely hindered improvements in

Figure 3.7

Europe: Growth Experience Beyond What Is Explained by Convergence

(Adjusted change in real GDP per capita, 2000–10, annualized, percent)[1]



Sources: IMF, World Economic Outlook database; and IMF staff calculations.
[1]The adjusted growth measures the difference between each country's actual growth rate and the growth rate that could be expected given initial income levels.

TFP or the speed of adoption of new technologies, or both, by discouraging workforce adjustments in otherwise high-turnover industries.[15] In more efficient labor markets, that is, those with more flexible wage determination and better relationships between employers and employees, wage increases are also more likely to remain in line with productivity growth, preventing undue losses in competitiveness and slower growth.

…as does a better-educated workforce

Investment in human capital promotes growth in both innovating and imitating countries (Figure 3.12). The economic growth literature shows that both growth and stock of human capital matter for GDP growth. Higher *growth* in human capital contributes to higher output growth, and higher *stock* of human capital increases the ability of a country to innovate or catch up with more advanced countries by imitation.[16] The type of education that matters for growth depends on the country's state of technological development. Investment in tertiary education is more growth-enhancing for countries closer to the technology frontier, because it increases their ability to innovate, whereas primary and secondary education are likely to yield relatively more benefits among countries that are technology imitators.[17] Evidence for Europe shows that underperforming countries—both those closer to the technology frontier and those further from it—produce relatively fewer tertiary graduates and have a higher share of population with only a primary or lower secondary school degree. Italy and Portugal are performing particularly badly on this front. In addition, there is evidence to suggest that the first stage of tertiary education programs (outside PhD or doctorate programs, level 5 of the International Standard Classification of Education [ISCED]) is particularly important for countries that are technology imitators.

[15] See Bassanini, Nunziata, and Venn (2009). As suggested in Aghion and Howitt (2009), high labor market flexibility could be particularly beneficial for innovation activities, which often require initiative, risk taking, the selection of good projects and talents, and weeding out projects that are not expected to be profitable or operational. However, a more rigid labor market may favor the accumulation of firm-specific human capital, which could be more important in imitation activities.

[16] See, for instance, Lucas (1988), Benhabib and Spiegel (1994), and Krueger and Lindhal (2001).
[17] See Aghion and others (2005).

Box 3.1

Stylized Facts from the Economic Growth Literature

The economic growth literature has developed four leading growth model paradigms. In all models, the *level* of economic output depends on the stock of capital and labor and the state of technological progress. More accumulation of capital and labor will not in itself lead to a permanent increase of the *growth rate*: technological progress is needed to offset diminishing returns to capital and labor. The models, which differ concerning what determines technological progress, are as follows (Aghion and Howitt, 2009):

- The neoclassical paradigm, in which technological progress is exogenous. Higher investment increases the *level* of output but does not affect the *growth rate*, which is determined by the exogenously determined rate of technological progress. Consequently, the paradigm does not provide long-term growth policy recommendations.
- The AK paradigm, which endogenizes technological progress by considering it part of capital accumulation.[1] This yields constant returns to scale in capital accumulation. Hence, growth can now be boosted by higher investment—in either physical or human capital.
- The product-variety paradigm, which endogenizes innovation by linking it to product variety. More product variety raises an economy's production potential, which offsets the negative impact of diminishing returns. Sustained growth is possible only if new varieties, resulting from R&D investments, are created.
- The Schumpeterian paradigm, which endogenizes innovation by linking it to firm turnover and "creative destruction." In this paradigm, a higher rate of firm turnover generates faster growth, as "creative destruction" generates the entry of new innovators and the obsolescence of old products. In this model, growth performance will vary with proximity to the technology frontier, and imitators will converge to the frontier at a higher speed until they need to switch to more innovation. Failure to operate the switch can prevent a country from catching up.

These paradigms have been used to explain different factors that account for the growth process.

Financial sector development promotes growth. A large body of evidence suggests that countries with more developed financial systems tend to grow faster—although causality can go both ways. Better functioning financial systems (i) ease real sector external financing constraints, especially in innovative sectors with fewer collateralizable assets and in countries that lie further away from the technology frontier; (ii) provide ex-ante information on viable projects; (iii) provide ex-post monitoring of investment performance and strengthen corporate governance; (iv) facilitate the trading, diversification, and management of risk (including macroeconomic volatility); (v) mobilize and pool savings; and (vi) ease the exchange of goods and services. Policies aimed at developing financial markets would then be indirectly promoting growth. These policies fall under six categories of purpose: (i) to strengthen political and macroeconomic stability; (ii) to strengthen the operation of the legal and information infrastructure; (iii) to strengthen financial system regulatory and supervisory framework; (iv) to promote market contestability and efficiency; (v) to reduce government ownership of financial institutions and promote public investment in infrastructure that facilitates access to finance; and (vi) to promote financial liberalization and sound institutional development.

Competition has a non-linear impact on growth. Both too much and too little competition can inhibit innovation. In addition, market contestability has a more positive impact on growth in countries closer to the technology frontier but a less positive impact on sectors or countries that lie further away from the frontier.

Note: The main author of this box is Gregorio Impavido.

[1] The name "AK model" originates from the mathematical representation of the production function in the model $Y = AK$, where Y represents the total production in an economy, A represents total factor productivity, and K is capital.

These findings have important policy implications, including the following: (i) the promotion of national "champions" inhibits growth in countries closer to the technology frontier; (ii) countries closer to the technology frontier should promote entry (also with public funding) of innovative firms; and (iii) domestic competition policy should be complemented by policies aimed at facilitating the reallocation of capital and labor from laggard to innovative sectors.

Investment in human capital promotes growth in innovator and imitator countries alike. On the one hand, countries closer to the technology frontier should invest in secondary and tertiary education, since this facilitates the shift from imitation to innovation and avoids low-growth traps. In particular, funding and autonomous universities are strategically complementary; that is, although funding education is not growth enhancing, it enhances growth when universities are autonomous, because this autonomy better aligns research with market needs. On the other hand, countries further away from the technology frontier should invest in primary and secondary education, because this facilitates the adoption of technologies developed by innovating countries.

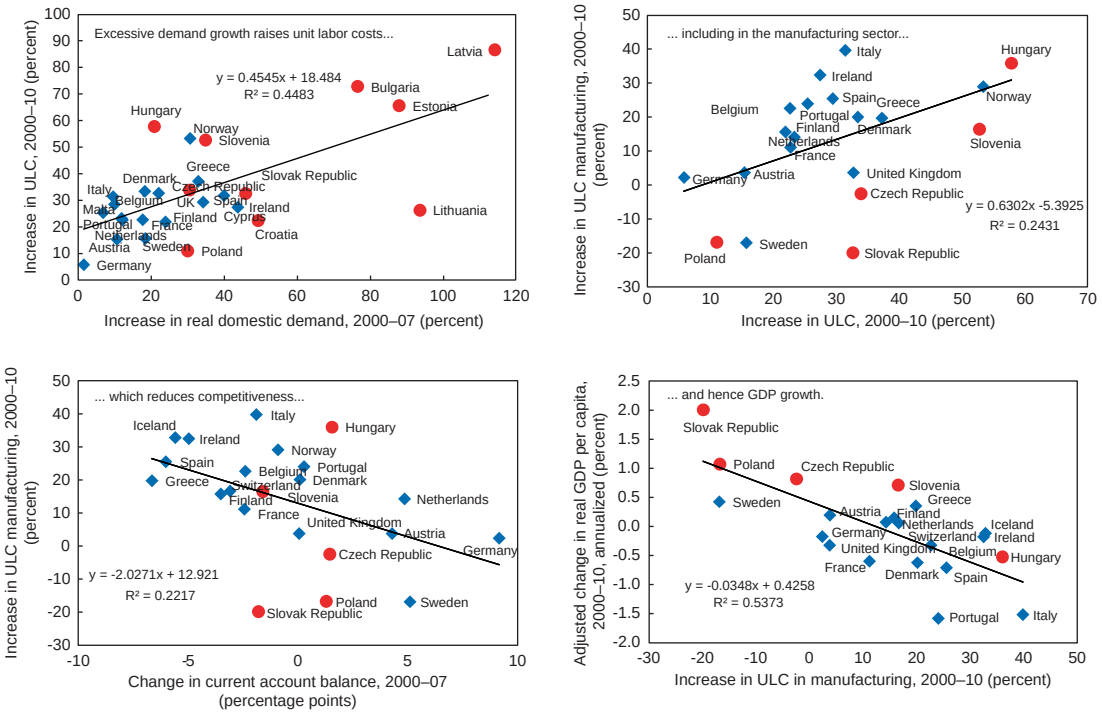
Macroeconomic volatility has a non-linear impact on growth. Volatility can promote aggregate savings and, therefore, growth when individuals have a strong preference for future, rather than current, consumption. More commonly, volatility hampers growth especially in less financially developed countries, which are less able to diversify macroeconomic shocks, causing lower investment in long-term R&D. In addition, the procyclical nature of R&D expenditures amplifies further the impact of macroeconomic volatility. Consequently, countries further below the technology frontier should prioritize financial sector development, especially in terms of low-end specialized intermediaries such as microfinance institutions. Countries closer to the technology frontier should prioritize access to external finance through capital market institutions such as private equity and venture capital. All countries would benefit from good macroeconomic policies to avoid short-term booms and busts that lower long-term growth rates.

Based on these theories, the empirical literature on growth has identified a number of macroeconomic, microeconomic, and institutional variables that are linked to long-term growth. Key growth determinants (of variable statistical relevance)[2] include (i) macroeconomic variables such as indicators of financial development, exchange rate evolution/variability/distortions, current account balance, money growth, government consumption and/or fiscal balance and/or government taxation, investment rate, human capital, trade openness, and volatility of shocks; (ii) institutional variables such as the rule of law, institutional quality and regulatory environment, expenditures and output of R&D, inequality, and political institutions; and (iii) demographic variables such as population growth or dependency ratio. The statistical relevance of these determinants varies widely and depends on many factors including, but not necessarily limited to, differences in country samples, other variables included in the regressions, and the econometric technique used.

[2] See, for instance, Chapter 8 of Aghion and Durlauf (2005).

Figure 3.8

Selected European Economies: Domestic Demand Booms and Their Impact on Long-Term Growth, 2000–10

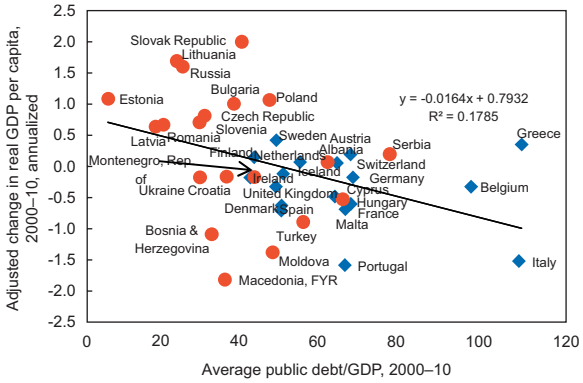


Sources: Eurostat; and IMF, World Economic Outlook database.

Figure 3.9

Europe: Public Debt and Adjusted Growth

(Percent)



Source: IMF, World Economic Outlook database.

For countries far from the technology frontier, economic liberalization is key…

For countries that are still far from reaching the technology frontier, economic liberalization reforms conducted during the transition process appear to be strongly growth enhancing. Countries that liberalized and reformed their economies earlier—including through privatizations; enterprise restructuring; liberalization of price, trade, foreign exchange, banking, and interest rates; and infrastructure reforms—have generally grown faster. Such reforms have helped them catch up more rapidly by fostering capital accumulation and the adoption or imitation of existing technologies (Figure 3.13).

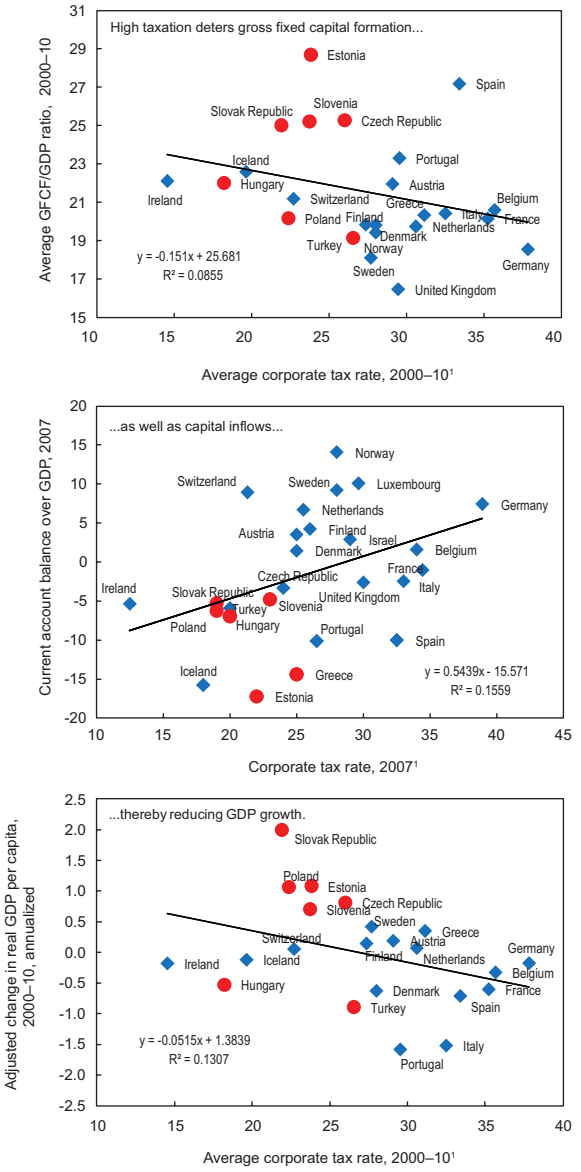
...as countries become richer, improving institutions becomes increasingly important for sustaining growth

When countries move closer to the technology frontier, product market efficiency becomes increasingly important. Ensuring a high degree of

Figure 3.10

Europe: Corporate Tax Rates and Growth, 2000–10

(Percent)

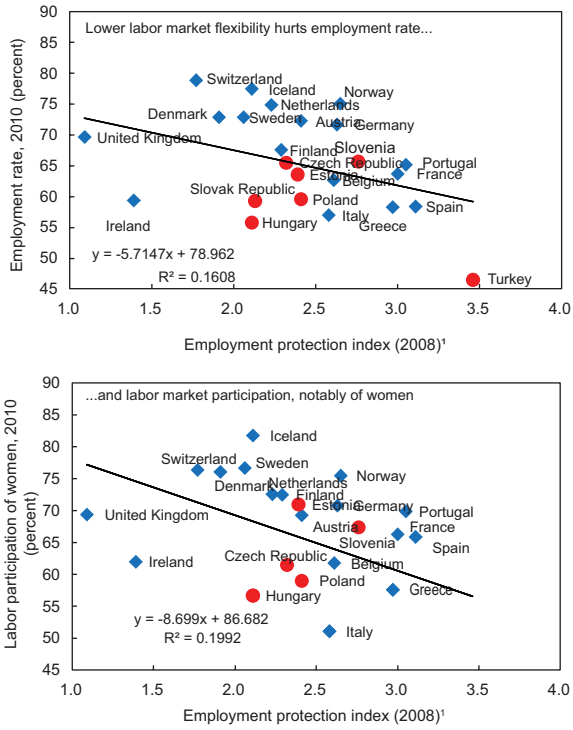


Sources: IMF, World Economic Outlook database; and Organization for Economic Cooperation and Development.

[1]Nominal corporate income tax rate.

Figure 3.11

Europe: Labor Market Flexibility, Employment, and Labor Participation, 2010



Sources: Organization for Economic Cooperation and Development; and World Economic Forum.

[1]Higher value means higher employment protection; 2008 is the latest year for which data are available.

product market competition appears to enhance growth in technologically advanced countries. As can be seen in Figure 3.14, good performers in advanced countries (such as Germany, the Netherlands, and Sweden) generally score better in terms of aggregate indicators of efficiency in the goods market and barriers to competition than slow-growing countries in advanced Europe (notably, Italy and Portugal).[18] This is in line with theoretical and empirical findings that show how competition encourages growth through two channels: by facilitating the entry of firms with quality-improving innovations and by encouraging incumbent firms in industries close to the technology frontier to innovate as the only available avenue to retain market share (Aghion and Howitt, 2009). Productivity and output will therefore be higher the more intense the competition in countries and sectors close to the technology frontier.

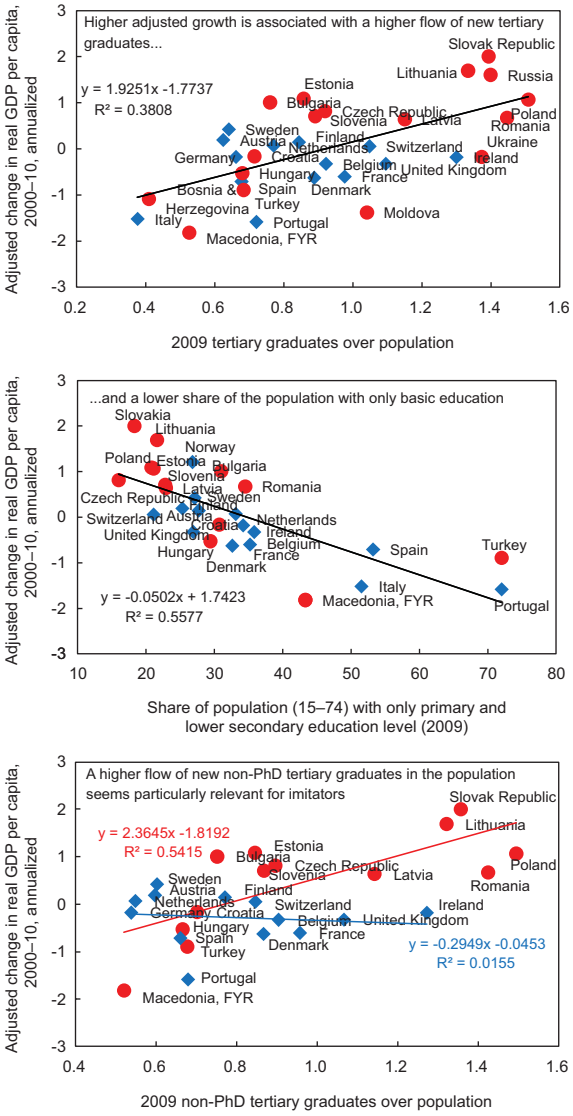
Quality of institutions is particularly important for growth in richer countries (Figure 3.15). Good

[18] The aggregate indicator of efficiency is an aggregate measure of domestic and foreign competition computed by the World Economic Forum in its annual *Global Competitiveness Report*, including the extent of market dominance, effectiveness of antimonopoly policy, tax and trade tariffs, restrictive rules on FDI, and so on.

Figure 3.12

Europe: Education Levels and Growth, 2000–10

(Percent)

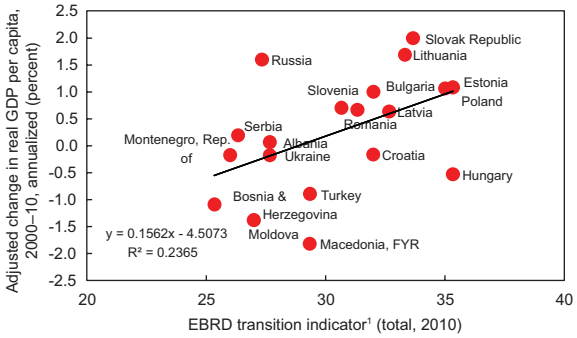


Source: Eurostat.

protection of property rights and a high level of legal security are associated with higher growth, in line with theoretical predictions and empirical findings (Bouis and others, 2011; Barro and Sala-i-Martin, 2004). The effect seems to run partly through R&D expenditures, which benefit from good legal systems and tend to boost growth by fostering innovation. There is also a strong positive association between the quality of institutions more generally and growth performance, but only for higher-income countries.

Figure 3.13

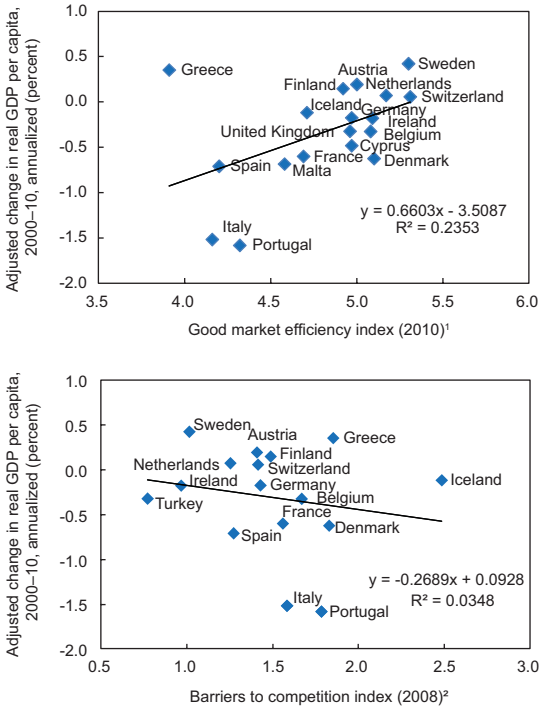
Emerging Europe: Economic Transition and Growth, 2000–10



Source: European Bank for Reconstruction and Development.
[1]Higher value means better score.

Figure 3.14

Advanced Europe: Product Markets Efficiency and Growth, 2000–10

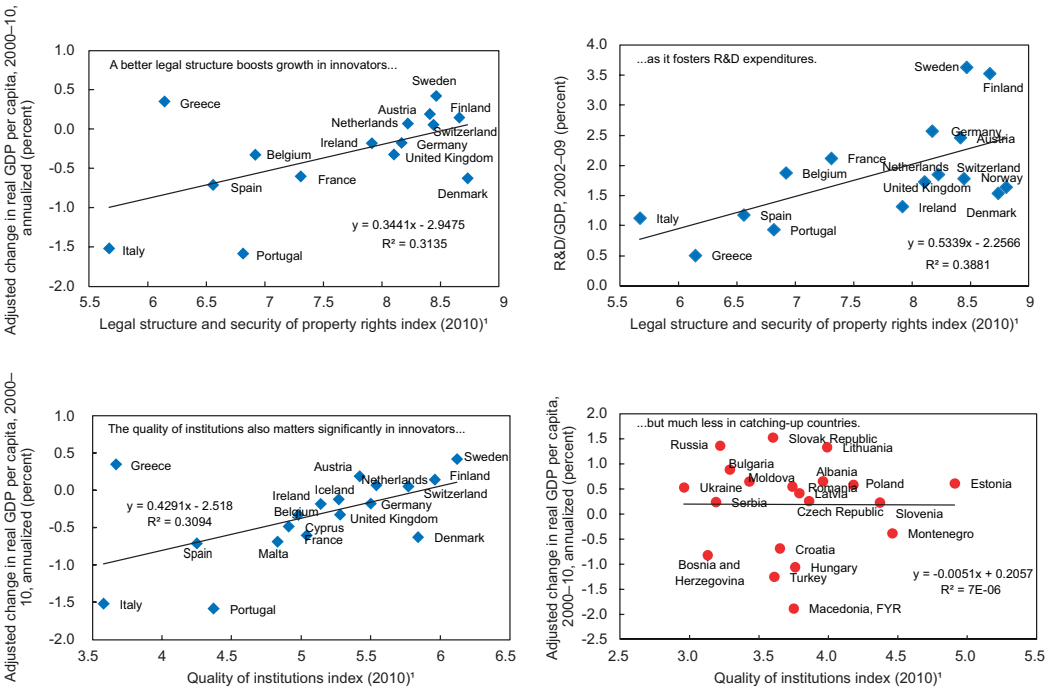


Sources: IMF, World Economic Outlook database; Organization for Economic Cooperation and Development; and World Economic Forum.
[1]Higher value means better score.
[2]Higher value means lower score. 2008 is the latest year for which data are available.

Good performers also have a generally high capacity for innovation (Figure 3.16). As stressed above, this is likely to be the result of their more efficient and competitive labor and product markets, their reliable institutions that foster

Figure 3.15

Advanced Europe: Institutional Quality, Legal Structure, and Growth, 2000–10



Sources: IMF, World Economic Outlook database; Frazer; Organization for Economic Cooperation and Development; and World Economic Forum.
¹Higher value means better score.

investment and innovation, and a more educated labor force. Innovation capacity matters a great deal in advanced Europe, which is closer to the technology frontier and therefore needs to grow via further innovation. Poor performers in advanced Europe manage badly on this front when measured by the number of patents granted, by an index of technological readiness (which measures capacity to develop and absorb new technologies), or by innovation capacity (which includes, in addition to R&D spending, the availability of scientists and engineers, university-industry collaboration, and government procurement of advanced technology).

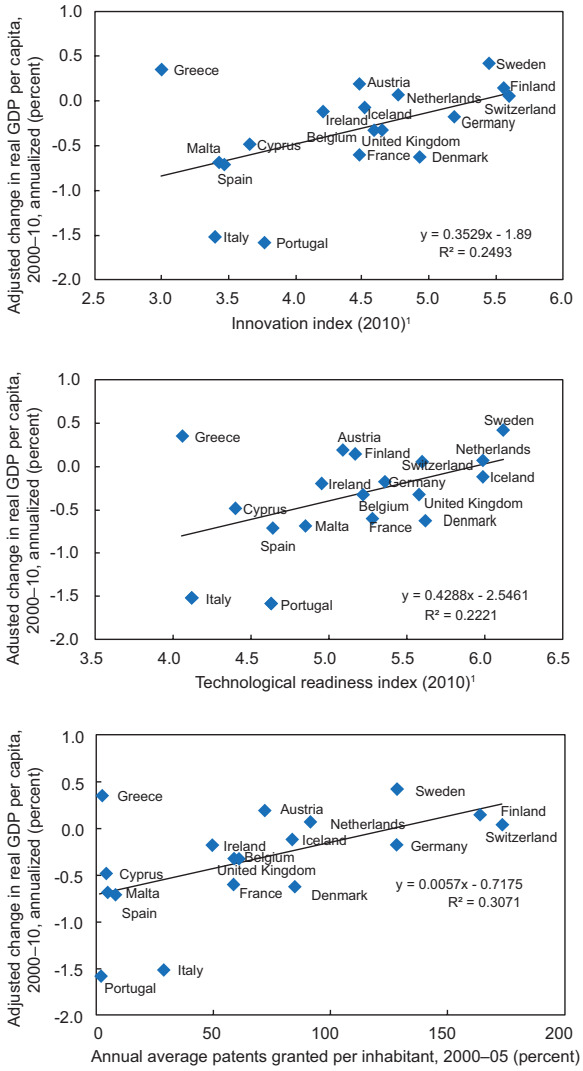
Trade integration: A critical transmission channel from institutions to growth

The relative degree of trade integration seems to strongly differentiate countries with high growth from those with slow growth. It is striking how many of the strong performers have enjoyed high and increasing levels of trade, both in exports and in imports, and how many of the poor performers have had much lower and stagnating levels, with growth driven more by the nontradable sectors. In Austria, Germany, the Netherlands, and Sweden, the share of export and import in GDP rose by about 15 percent to more than 20 percent between 1995 and 2010. The same was true for the Czech and Slovak Republics, and, to a lesser extent, Poland. At the other end of the spectrum, the export-to-GDP and import-to-GDP ratios of Greece, Italy, Portugal, and Spain stagnated over those years (Figure 3.17).

Differences in the degree of trade integration likely have little to do with trade policies as such. Generally, trade liberalization is a key driver of growth and in Europe, it has certainly played an important role in the increase of trade shares over time as the EU expanded, deepened, and developed closer ties with non-members in Europe and beyond. However, trade policy is identical for all EU countries and therefore cannot explain growth differentials among them.

Figure 3.16

Advanced Europe: Innovation, Technological Readiness, and Growth, 2000–10



Sources: Eurostat; and World Economic Forum.
[1]Higher value means better score.

Rather, trade integration reflects both better institutions and market competitiveness and amplifies their impact on growth. As previously mentioned, a more competitive and flexible labor market, as well as better institutions, encourages firms to imitate and innovate, resulting in higher TFP growth and external competitiveness. Countries with these advantages are likely to display higher export growth (Figure 3.18). At the same time, trade integration enhances growth since competition diverts resources from the nontradable to the more productive tradable sectors. Conversely, poor institutions that pose barriers to competition distort resources toward the protected nontradable sectors, such as real estate and construction, which are weaker sources of productivity growth. As can be seen in Figure 3.19, more manufacturing and less real estate and construction activity are associated with higher labor productivity and TFP growth.

Twenty to thirty years ago, Italy, Portugal, and Spain managed to grow relatively quickly, not only because they were benefiting from the catching-up effect but probably also because their institutions at the time were more appropriate for their stage of economic development, which was then based on technology imitation. However, as these countries moved closer to the world technology frontier, they needed to switch toward institutions more suited to innovation-based growth. That did not occur, and their ability to innovate and move up into new industries and technologies suffered. Consequently, their growth was hurt by low-cost competition from emerging Europe and China in their traditional labor-intensive manufacturing sectors.[19]

Low Growth Traps and How to Get Out of Them

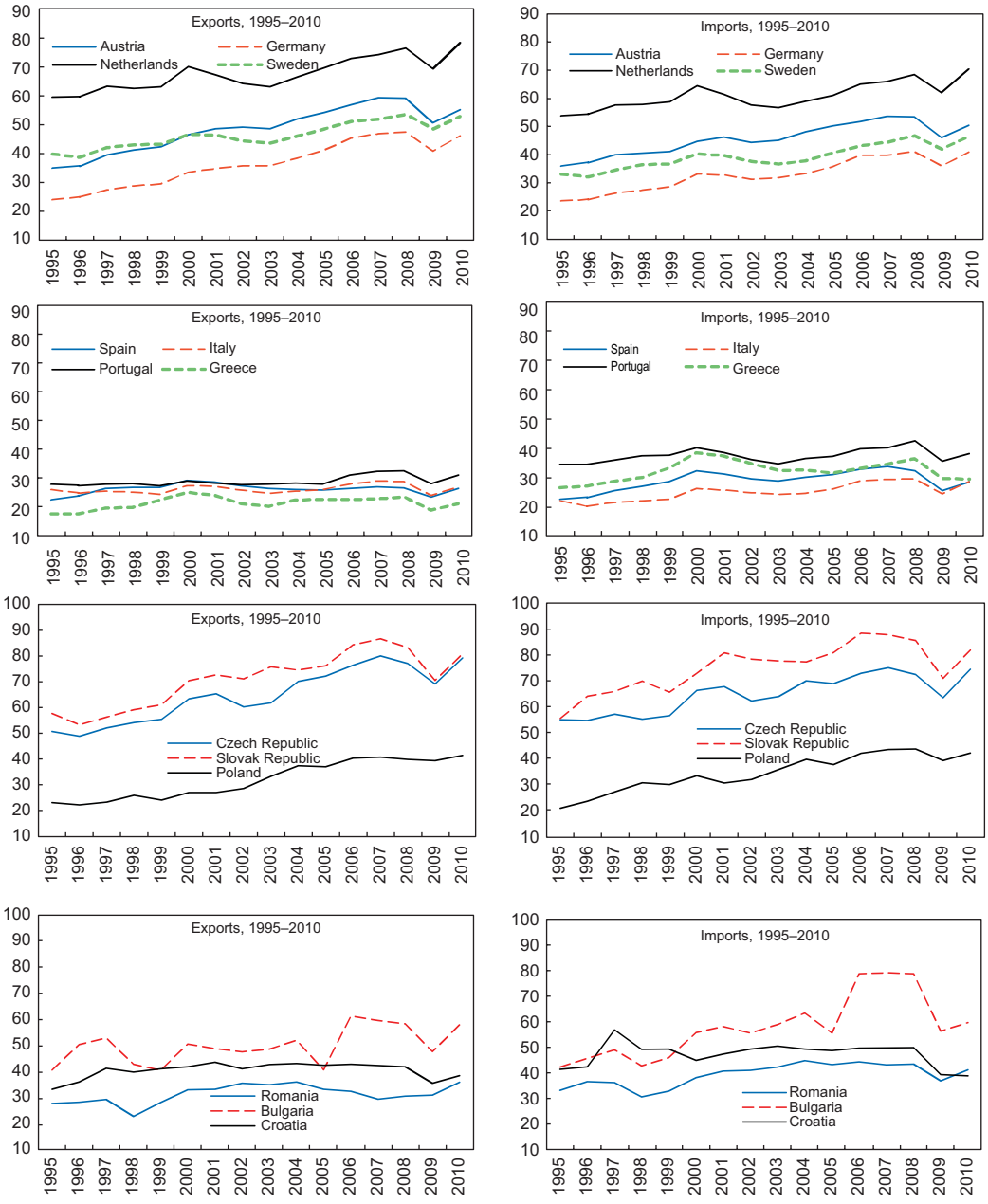
Heavily regulated goods and labor markets, poor institutions, and macroeconomic policies can interact to pull countries into low growth traps (Figure 3.20). Countries with inadequate institutions and less competitive markets are likely to see lower rates of innovation and stronger growth in the nontradable than in the tradable sector, leading to slower TFP growth. This, in turn, discourages investment in human capital, thereby reducing innovative capacities. The uncompetitive firms in these countries are apt to lobby the government to maintain barriers to competition to thwart new entrants. A vicious circle results with economies bound to grow less over the long term. Overly stimulative macroeconomic policies can further encourage investment in protected sectors by inflating domestic asset prices; this can lead to

[19] Chen, Milesi-Ferretti, and Tressel (forthcoming).

Figure 3.17

Selected EU Countries: Trade Openness, 1995–2010

(Percent of GDP)

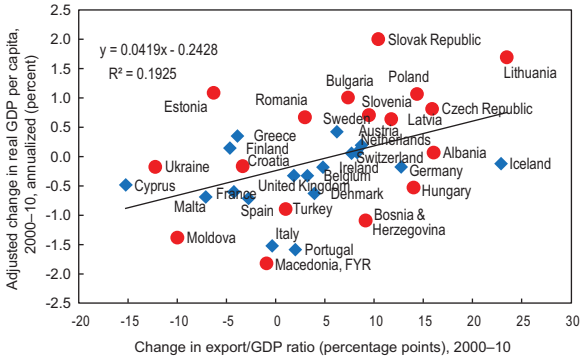


Source: IMF, World Economic Outlook database.

boom-bust cycles that yield private and public debt overhang, depressing growth further.

Conversely, more competitive goods and labor markets, a better educated labor force, good institutions, and prudent macroeconomic policies can set a country on a higher growth path. With more efficient institutions and more competitive markets, workers and companies are better positioned to innovate and more flexibly adapt to international competition. In these economies, trade promotes productivity growth as it provides

Figure 3.18
Europe: Trade Openness and Growth, 2000–10



Source: IMF, World Economic Outlook database.

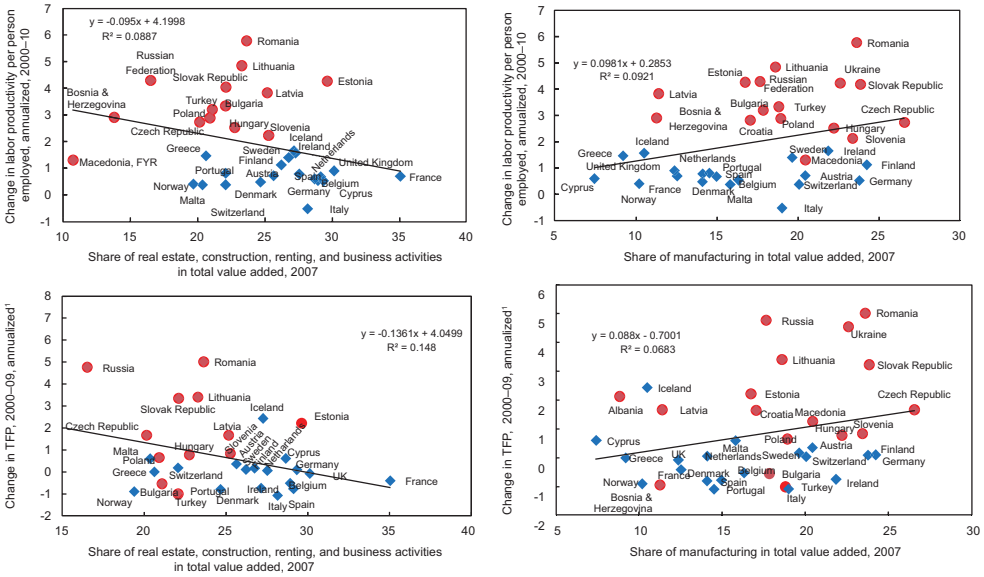
economies of scale in production and more scope for learning-by-doing externalities and knowledge spillovers. In addition, firms not only are forced to innovate by global competition, they also are more inclined to invest in R&D because of bigger ex-post rents that accrue to successful innovators in a larger external market. A vibrant, skill-intensive sector that offers employment opportunity will encourage investment in human capital, which will contribute further to the innovative capacity of the economy. Stronger growth in turn allows government to reduce expenditures (for example, on unemployment benefits) and opens the opportunity to lower taxes and stimulate investment.

Escaping low growth traps: Experience and lessons

The problem of slow growing countries in Europe is not new. In the late 1970s and early 1980s, many countries in Europe suffered from "euro sclerosis"—with high unemployment and low growth. These earlier periods provide important lessons, as they show that a change in policy can turn an economy around.

The experiences of the Netherlands and Sweden in particular show that it is possible to turn poor economic performance around. In the 1980s and 1990s, these two countries undertook sweeping reforms to boost GDP growth after prolonged periods of poor economic performance

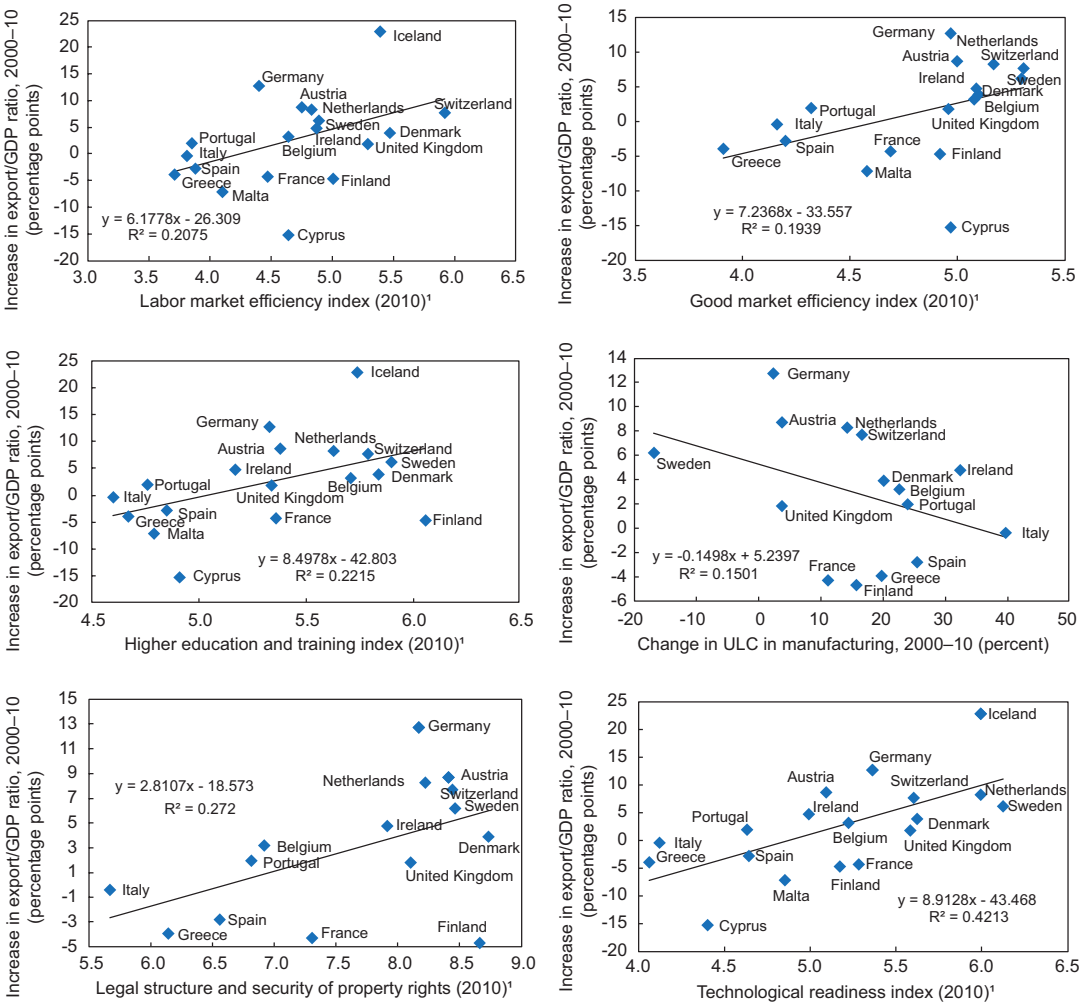
Figure 3.19
Europe: The Size of Tradable and Nontradable Sectors Relative to Productivity and Growth, 2000–10
(Percent)



Sources: Conference Board Total Economy Database, January 2011; and Eurostat.
[1]Data for Emerging Europe are for 2000–08.

Figure 3.20

Advanced Europe: Market and Institutional Efficiency Relative to Export Growth, 2000–10



Sources: Frazer; IMF, World Economic Outlook database; and World Economic Forum.
¹Higher value means better score.

(Boxes 3.2 and 3.3). Their experiences provide useful insights into how reforms could help other countries significantly reverse their economic fortunes.

Both countries undertook reforms only after a protracted economic malaise that culminated in a crisis. Income per capita was falling relative to that of Germany for about a decade (Figure 3.21). In addition, public finances were deteriorating: spending increased (Figures 3.22), and fiscal deficits were growing. Wage growth was also high in both countries, contributing to a decline in employment in the Netherlands (Figures 3.23 and 3.24). In Sweden, growth was also held back by reliance on relatively low value-added industries, the banking crisis in the early 1990s, and a stifling tax system. Finally, the erosion of competitiveness also contributed to deterioration in current account balances.

While each country's reform package differed in details, both included the same mix: measures to correct macroeconomic imbalances and measures to achieve comprehensive structural reforms. Both sets of measures were needed: on the one hand, macroeconomic stabilization

Box 3.2

Labor Market Reform: The Experience of the Netherlands in the 1980s–1990s[1]

Triggered by poor economic performance in the 1970s and early 1980s, the Netherlands undertook a series of labor market reforms that resulted in strikingly rapid employment growth. Excessive wage growth in the 1970s and early 1980s had led to a decline in private sector employment, as investment and job growth slowed. When unemployment shot up sharply from 1979 onward, in a recession that was much deeper than elsewhere, a consensus for reform gradually emerged.

Labor market reforms started in earnest in late 1982 with an agreement between unions and employers to pursue wage moderation in exchange for employment creation (the "Wassenaar agreement"). The agreement abolished automatic price indexation—not only in new wage agreements but also in existing wage agreements.

Subsequent governments implemented a series of labor market and fiscal reforms that complemented and reinforced each other.

- The level of the real minimum wage was reduced sharply. It was first cut by 3 percent and subsequently frozen in nominal terms for many years. As a result, by 1997, the real minimum wage had declined by 22 percent from its 1979 peak. The youth minimum wage was reduced even more sharply.
- Civil servants' salaries were subject to the same cuts and freezes as the minimum wage and declined in real terms by about the same percentage.
- The social security benefits replacement rate was cut significantly. Wage-related unemployment, sickness, and disability benefits were cut from 80 percent of wages to 70 percent; and the duration of unemployment and disability benefits was shortened. The minimum benefit, which is linked to the minimum wage, fell substantially in real terms.
- To support wage moderation, taxes and social security contributions paid by employees were cut substantially. As a result, disposable incomes rose substantially even in the absence of real wage increases.
- To finance the tax cuts, the government cut primary public expenditures by 14 percentage points of GDP. As a result, the government managed to reduce taxes and the budget deficit at the same time. The budget balance changed from a deficit of 6.2 percent of GDP in 1982 to a surplus of 2.2 percent in 2000.

The reforms contributed to a rapid increase in employment. Employment grew from 1984 onward, initially at a moderate rate, and accelerated further with the strong economic performance in the 1990s, helped as well by substantial financial sector and product market reforms. Employment growth largely benefited new entrants to the labor market, including recent graduates and women. The youth unemployment rate dropped sharply, from a peak of 25 percent in 1985 to 6¼ percent in 2008—the lowest rate in the European Union. The labor force participation of women rose sharply. Although most women worked part-time, this phenomenon seems to reflect cultural preferences rather than government policies.

Further reforms were undertaken in the last decade that reduced the generosity of the unemployment insurance and disability insurance programs. Also, tax rules were changed to stimulate working for second earners, and the tax advantages for early retirement were abandoned. During this period of reforms, the number of benefit recipients was reduced substantially and labor force participation rates increased.

Note: The main author of this box is Yan Sun.

[1] This box is partly based on Chapter III of IMF (2004), "The Netherlands: How the Interaction of Labor Market Reforms and Tax Cuts Led to Strong Employment Growth," with additional material from Gautier and van der Klaauw (2009).

Box 3.3

Sweden: Structural Reforms in the 1990s

The banking and financial crisis of the 1990s in Sweden triggered far-reaching macroeconomic and structural reforms that set the stage for Sweden's higher output growth in the late 1990s and 2000s. The reforms involved restoring a credible macroeconomic policy framework, and included a battery of structural reforms in the product and labor markets.

The first step in the aftermath of the crisis was to restore a credible, rule-based macroeconomic policy framework. This included: (i) the establishment of an inflation target in 1993 resulting in a drop in inflation (from an average of 7.5 percent in 1980–1990 to about 1.5 percent in 1993–2000); (ii) an impressive and successful fiscal consolidation, with the general government debt-to-GDP ratio falling from 72.5 percent in 1994 to 53 percent in 2000, the government expenditures-to-GDP ratio falling by about 16 percentage points between 1993 and 2000, and the budget balance turning into a surplus in 1998 from a double-digit deficit in 1993; (iii) the introduction of a detailed fiscal framework, including a nominal expenditure ceiling for the central government, a structural budgetary surplus target for the general government, and a balanced budget requirement for local governments, which helped the government to run a budget surplus every year between 1998 and 2008, except for 2002 and 2003; and (iv) a comprehensive pension reform put into effect in 1999. The new and more stable macroeconomic framework greatly improved policy credibility, thereby contributing to more moderate wage agreements. Moreover, the stronger public finances enabled some reduction in the high tax burden.

Successive reforms were implemented to improve labor market outcomes.

- In 1991, a comprehensive tax reform was implemented to mitigate the negative effects of the growing welfare state on labor supply. The reforms aimed at shifting the tax burden from labor income to consumption and capital income. The measures included lowering the marginal tax rates on earned income, widening the tax base, eliminating tax shelters, and introducing a more uniform taxation of capital. It is estimated that the tax reform led to an increase in labor supply of about 2 percent.[1]

- In 1997, a new agreement was reached by industrial labor unions to restrain wage increases. The consensus followed an unprecedented increase in the unemployment rate after the crisis (from 1.7 percent in 1990 to 9.4 percent in 1994). The agreement established explicit rules concerning the regulation of negotiations and the resolution of disputes; reintroduced more coordination in wage bargaining; and re-established the pacesetting role of the sectors exposed to international competition.

- Other complementary reforms targeted training, work incentive, employment protection, and education. These included a reorientation of active labor market policies toward training programs and/or practical insertion courses; relaxing employment security provisions; and to some extent, reducing the replacement rate in social insurance, and raising the qualification period for unemployment benefits.[2] Extensive reforms in the education system (primary to tertiary) were also conducted in the 1990s.

Building on the successes of early deregulations, additional product market reforms further promoted competition and restructuring. Early deregulation and the promotion of competition in the late 1980s fostered rapid restructuring and large productivity gains in the export sector. In particular, deregulation in the telecommunication sector (Sweden being the first country in Europe to deregulate its telecommunications market)

Note: The main author of this box is Géraldine Mahieu.

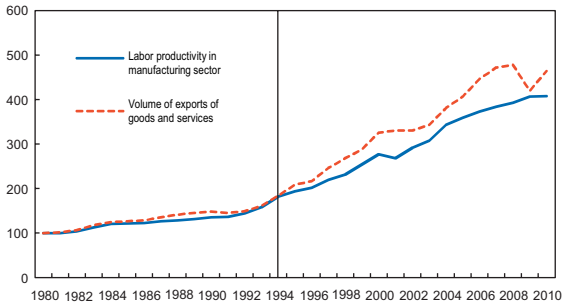
[1] Agell and others (1998).

[2] The generosity of the social security system, however, remained elevated compared with other European countries, whereas the level of employment protection was relatively low, in line with the concept of "flexicurity" also introduced in Denmark.

helped to spur competition and establish mobile phone access throughout the country.[3] Building on these early reforms, a new Competition Act and a new enforcement agency were created in 1993. After the EU accession in 1995, Sweden rapidly implemented all major directives of the internal market program and by 1998 was far ahead of many other EU countries.[4] These rapid product market reforms led to efficiency gains and helped the manufacturing industry transform from traditional industries in the 1980s to more knowledge-intensive and less labor-intensive production in the 1990s, leading to higher productivity gains.[5]

The restored macroeconomic stability and structural reforms, coupled with a strong IT sector, paved the way for growth, which averaged close to 3.5 percent between 1994 and 2007. With a more flexible labor market, a more competitive product market, and a strong IT sector, which Sweden was well positioned to capitalize on, it was able to emerge rapidly from the crisis when the international outlook improved. Wage growth restraint, improved macroeconomic stability, and higher productivity growth led to rapid growth in the export sector (notably the IT sector), which in turn became the main engine of growth. The real growth rate of export and labor productivity both doubled from the 1980s to the 1994–2008 period, rising from about 4 percent to 8 percent and from 3 percent to 6 percent, respectively (see figure).

Sweden–Labor productivity and volume of exports
(Index, 1980 = 100)



Source: IMF, World Economic Outlook database.

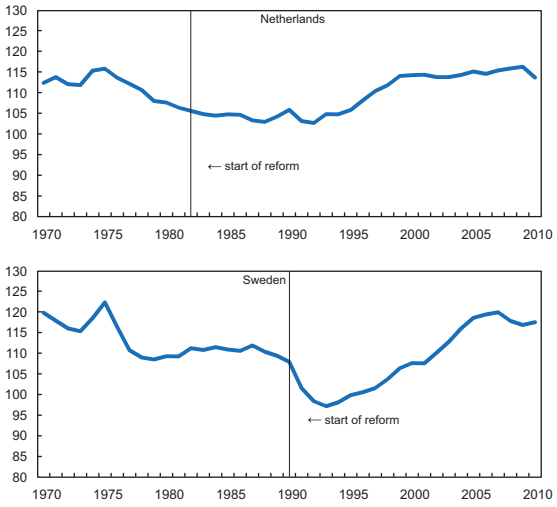
[3] Other factors, such as early investment by Ericson and the public telecommunications monopoly in establishing a mobile network, a high level of expenditures in R&D, a highly skilled labor force, and several public incentives to the adoption of ICT, also contributed to the emergence of a strong high-tech sector in Sweden.
[4] OECD (1998).
[5] In the 1980s, traditional industries such as steel, iron, and paper represented close to 20 percent of exports, whereas chemicals and telecom accounted for less than 9 percent. By the 1990s, the share of traditional industries had fallen to 13 percent whereas chemicals and telecom represented more than 20 percent.

policies without structural reforms would only deliver low, albeit stable, growth—as Italy has experienced in recent decades (Box 3.4); on the other hand, structural reforms without good macroeconomic policies could lead to large swings in economic growth and make sustained high growth all but impossible.[20] This was made painfully clear by the crises experienced in these two countries before their reforms.

From the start, structural reforms in these countries focused on clearing up the worst bottlenecks to growth. These bottlenecks manifested differently in different countries, so the initial priorities of reform also differed. In the Netherlands, a strong initial objective was to contain excessive wage growth and boost

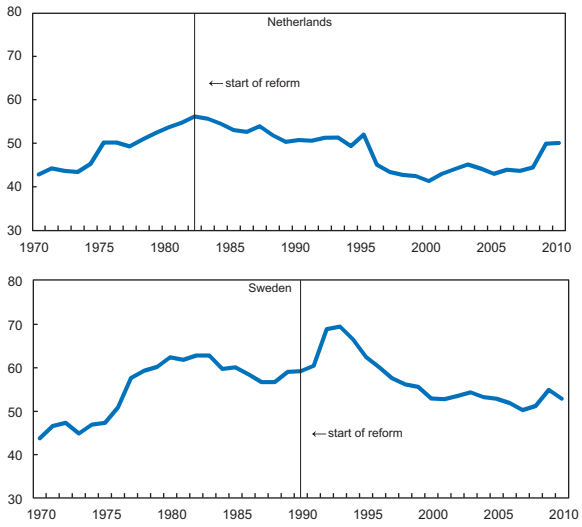
[20] Low growth, in turn, could derail the macroeconomic stabilization attempt, because it reduces fiscal space.

Figure 3.21
Netherlands and Sweden: GDP per Capita Relative to Germany, 1970–2010
(PPP terms, percent)



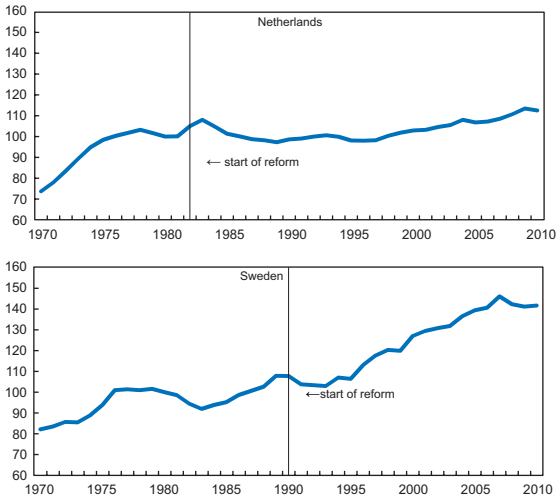
Sources: Conference Board Total Economy Database, January 2011; and IMF staff calculations.
Note: Germany's GDP per capita before 1989 was constructed using the growth rate of West Germany's GDP per capita.

Figure 3.22
Netherlands and Sweden: Government Primary Spending, 1970–2010
(Percent of GDP)



Sources: IMF staff calculations; and Organization for Economic Cooperation and Development.

Figure 3.23
Netherlands and Sweden: Real Compensation Rate of the Private Sector, 1970–2010
(Index, 1980 = 100)



Sources: IMF staff calculations; and Organization for Economic Cooperation and Development.

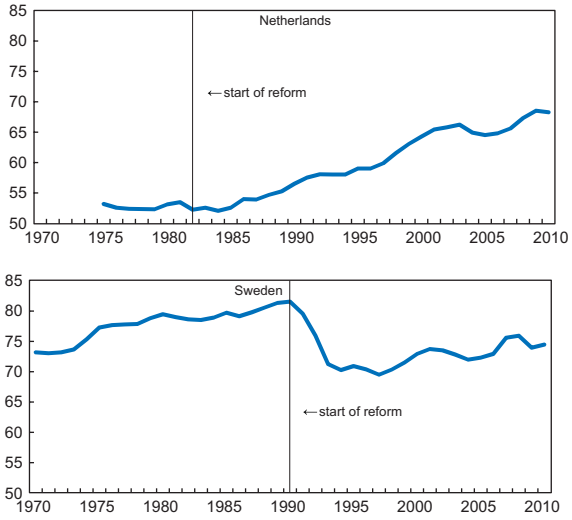
employment, and thus the centerpiece of the reform package was a wage agreement between employers and unions.[21] Sweden addressed its core problems through a combination of fiscal consolidation, tax reform, financial sector clean-up, and an overhaul of the wage bargaining system. In addition, further liberalization of network industries and reduced barriers to competition provided room for

[21] In the Netherlands, labor market reforms were accompanied by efforts to privatize government stakes in high-profile enterprises (steel and airlines) and to allow the bankruptcy of a major loss-making shipbuilder (which had received substantial government support). Both of these efforts signaled a change in industrial policy. Additional product market reforms, such as liberalizing licensing requirements and introducing new competition laws that included anticartel measures, were introduced a few years later. In Sweden, the wage bargaining system was reformed by reintroducing more coordination in the wage bargaining process and by using wages in the tradable sector (exposed to global competition) as a benchmark for wage negotiations. The reform of the wage bargaining system was accompanied by other labor market reforms in 1997 and by a deregulation of product markets.

Figure 3.24

Netherlands and Sweden: Employment Rate, 1970–2010

(For age group 15–74 in the Netherlands and 15–64 in Sweden; percent)

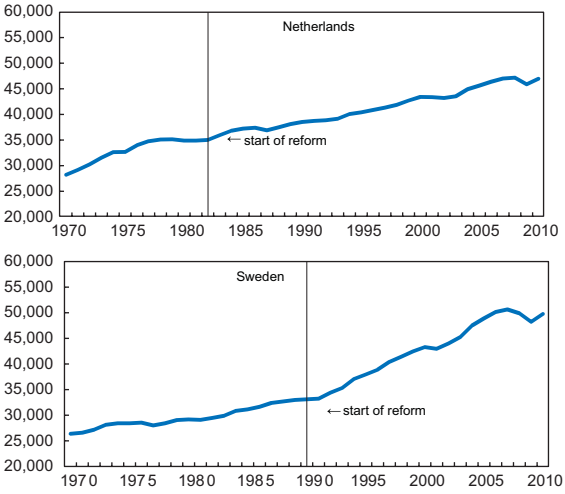


Sources: Central Planning Bureau (Netherlands); and Organization for Economic Cooperation and Development.

Figure 3.25

Netherlands and Sweden: Labor Productivity per Worker, 1970–2010

(1990, PPP US dollars)



Sources: Conference Board Total Economy Database, January 2011; and IMF staff calculations.

new industries to flourish. This followed earlier reforms in the telecom sector, which had already contributed to the emergence of a strong telecom industry. Structural reforms were generally implemented in both the product and labor markets. Coordinated reforms helped countries reap complementary gains—although the exact sequencing reflected different priorities and political constraints.[22]

Although reforms spanned more than a decade and took time to yield their full benefits, they were successful, as per capita income in both the Netherlands and Sweden is now significantly higher than in Germany (Figure 3.21), driven by strong growth in employment and higher productivity (Figures 3.24 and 3.25). In addition, there is a vibrant tradable sector, with exports increasing by 17 percentage points and 19½ percentage points of GDP, respectively, in the Netherlands and Sweden (Figure 3.26).

The United Kingdom provides another example of a country that undertook major reforms, which began in the late 1970s (Box 3.5). Those reforms helped reverse its relative decline in economic performance and set in motion a sustained improvement in income relative to Germany until 2005. The reforms contained many elements that were later adopted in the Netherlands and Sweden. In fact, reforms in the United Kingdom preceded most of the structural reform efforts in Europe since the 1980s. The United Kingdom's macroeconomic policy, however, has been less countercyclical, and that has contributed to severe boom-bust cycles. Denmark also undertook very ambitious labor market reforms and experienced a relatively benign impact of the 2008/09 crisis on

[22] It has been well documented that there are complementary gains from these reforms. For example, based on an OECD country panel from 1990–2004, Berger and Danninger (2005) find that lower levels of product and labor market regulation foster employment growth, including through sizable interaction effects, and note that unless deregulation costs are asymmetric across markets, optimal deregulation requires some form of coordination. There is also theoretical support for some sequencing of these reforms; for example, see Blanchard and Giavazzi (2003).

Box 3.4

Why Has Italy Grown So Poorly in the Last 20 Years?

In the last two decades, Italy's growth has been disappointing (IMF, 2011d). By the late 1980s, Italy's GDP was no longer catching up with the U.S. GDP. More recently, Italy suffered one of the largest output contractions in the euro area during the global financial crisis and is now experiencing one of the slowest recoveries. Per capita GDP, as well as productivity, was lower in 2010 than in 2000 (Figure 3.1).

Although Italy undertook various structural reforms during the period, they were not comprehensive enough to lift growth. During the period, manufacturing, banking, and public utilities were all either privatized or liberalized. These reforms contributed to higher productivity and profitability in the banking and manufacturing sector, but they were less successful in the public utilities sector, where reforms were either incomplete or failed to address additional bottlenecks.[1] Labor market reforms eliminated full wage indexation, reduced central bargaining, promoted the use of temporary employment, and increased flexibility for new hires. However, failure to eliminate protections granted to workers with permanent contracts created a dual labor market. Successive pension reforms reduced entitlement and fiscal outlays for the future. Recent regulatory reforms have attempted to re-organize public administration to increase its efficiency and transparency, but they are largely experimental and constrained by fiscal cuts.

Largely the result of underlying structural constraints, several interconnected and often endogenous factors explain why Italy's growth performance lags by international comparison:[2]

- Inefficient public expenditure and a complex tax system hinder fiscal consolidation and growth. Italy scores poorly in terms of the quality and efficiency of public expenditure, and it stands out among countries with the highest tax burden and lowest tax compliance (EC, 2009). Overall, progress on improving public expenditure has been limited, although some steps have been taken to improve the budget classification, institutionalize spending reviews, and reorganize public administration. Further fiscal consolidation is constrained by the size of transfers to subnational governments, large entitlement programs, and the sizable interest expenditure. Finally, the tax system is unduly complex and prone to abuse. This limits labor utilization (see below), promotes evasion, and limits the ability to reduce the debt relative to GDP and attract FDI into the country.

- Labor productivity is low and falling. Limited labor market reforms have not prevented real wage growth from outpacing the modest productivity gains, causing unit labor costs to increase. Wage bargaining remains excessively centralized so that in effect, real wages in all sectors cannot fall and the ability to align them with productivity at the plant level is severely constrained.[3] Increasingly, firms are unable to compete with low-cost producers in the global market as Italy's pattern of export specialization in low-skill labor-intensive goods has contributed to weak productivity growth.[4] In addition, the ability to reabsorb the capital and labor released remain constrained by a poor regulatory and business environment. Finally, while low-skill immigrant workers have partly offset the negative impact of low labor participation (see below) and a rapidly aging society, it may also have contributed to a decrease in average productivity.

Note: The main author of this box is Gregorio Impavido.

[1] For instance, corporate governance practices imply that despite privatization, the government maintained de facto control of privatized companies though minority shares.

[2] See IMF (2011f) for a detailed analysis on the product and labor market's inefficiencies hampering growth.

[3] The 2011 reform introduces flexibility in wage negotiations with unions at the plant level. In addition, it allows firms to go outside the national framework. In the future, this should help better align wages and productivity.

[4] For such a specialization pattern, the power to pass prices to international markets is low, and international market shares are lost in response to a wage growth that has outpaced productivity gains, hence, accelerating the loss of competitiveness.

- Labor participation is low. For instance, the labor participation of women is constrained by the lack of a family policy and formal child care structures. In addition, old age participation is reduced by a pension system that until recently favored early retirement. In general, demand for labor is constrained owing to (i) skill mismatches between what the education system produces and the labor market demands (see below); (ii) a high tax wedge, especially for low-skilled workers; (iii) complex rules stemming from the aforementioned labor market reforms protecting insiders with permanent contracts at the expense of part-time and younger workers (and in turn encouraging a brain drain among young talent); (iv) lack of competition in the product market; and (v) stagnant growth.
- Innovation in new dynamic firms is low. A series of factors hinder innovation by Italian SMEs (see figure). Until recently, the barriers to business creation were significant, and the experience with "one-stop shops" (introduced in 2005) to reduce these barriers has been varied (OECD, 2009). In addition, until 2006, bankruptcy legislation also hindered exits, as entrepreneurs were exposed to risky criminal proceedings, putting personal wealth at risk. At present, the equity market is underused and venture capital market is slow to develop. This is partly due to a still embryonic market of institutional investors, lack of regulations encouraging investment in SMEs (Bongini and Impavido, forthcoming), and weak corporate governance practices, despite adopted regulations that follow OECD best-corporate governance practices (OECD, 2009). Indeed, the widespread use of pyramidal and cross-ownership structures gives insiders control that significantly exceeds their share in ownership and limits the effective rights of minority shareholders. In general, the high levels of public ownership, especially at the local level; regulatory barriers to competition; high administrative burden on firms; and constraining regulations for professional services have all been factors contributing to Italy's inability to attract FDI and limiting access to finance innovation. These, in turn, have hindered the growth of firms beyond the family-control threshold.
- Civil courts remain inefficient (OECD, 2009). Regulations aimed at protecting the privileges of judges and lawyers (in terms of pay and status) imply that the average duration of cases is the highest in Europe, although with important regional variations. Claims are usually settled out of court through private negotiations. The inefficiency of the civil justice system amplifies the problems caused by the aforementioned underdeveloped

Italy's innovation performance lags by international comparison

Source: Organization for Economic Cooperation and Development (2011).
¹BERD: Business Enterprise Expenditure on R&D; GERD; Gross Domestic Expenditure on R&D; and HRST: Human Resources in Science and Technogy.

Box 3.4 *(concluded)*

capital markets and weak corporate governance, and it represents another bottleneck keeping firms from growing beyond the threshold below which family control is still an effective organizational form for enforcing contracts.

- Attainments in education are low (OECD, 2009, 2011). Although there are important regional variations, Italy ranked among the five worst OECD performers in the 2006 PISA tests, possibly because of the absence of a national standard test for secondary schools. The share of tertiary graduates in the labor force is just 14 percent, only half the OECD average. Drop-out rates are high with only 45 percent of students entering tertiary education actually completing their studies, well below the 65 percent OECD average. Duration of studies at the university level is significantly higher than the OECD average as well (66 percent of students remain at the university beyond the normal duration of courses). This low performance is partly explained by the fact that universities are generally not allowed to select students; they are not autonomous in defining curricula and hiring faculty; they are poorly governed with inadequate funding; and they lack accountability. In addition, they have poor human resources owing to the lack of performance-based careers and remuneration, and a system of nationwide public competition for academic positions that favors insiders (OECD, 2011; Perotti, 2008). As a result of these shortcomings, Italian universities often generate skill mismatches relative to what is demanded by the market; have a low contribution to human capital formation in general, thereby reducing labor utilization (see above); and worse, contribute little to R&D expenditure, hindering innovation. The new University Reform Act (Law 240/2010) aims to address many of the aforementioned shortcomings, but the reforms are still in their infancy.
- Finally, regulations at the regional and local levels reduce further the flexibility of domestic markets. In some sectors, such as commercial distribution, pharmaceuticals, and the transport sectors, regional and even municipal regulations add further complexity. For instance, (i) the proliferation of regional statutes creates inefficiencies; (ii) the process through which measures are enacted lacks transparency and statutes are not subject to evaluation to determine their costs to firms, consumers, and the public administrations involved; (iii) commercial distribution is overregulated; and (iv) restrictions on market entry, both general and sectoral, are still rife.[5]

[5] However, recent reforms introducing tender requirements for a number of local public services should increase transparency and accountability and thereby encourage entry of qualified service providers.

unemployment, in part owing to its fairly liberal product market regulation.[23,24]

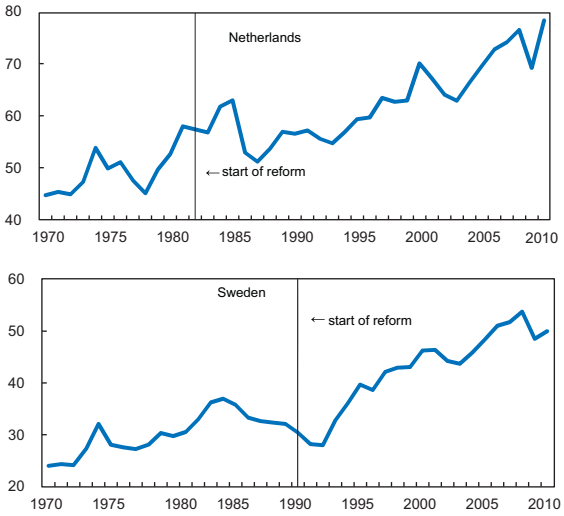
These reform experiences suggest the following lessons for other poor performing countries that may be embarking on major reforms, in both advanced and emerging Europe.

- *It is critical to correct macroeconomic imbalances.* This is particularly crucial for those countries that are facing increasing market pressures to secure fiscal sustainability (such as Hungary and Italy). A credible consolidation plan would reduce vulnerabilities. For Hungary, where government spending accounts for about half of GDP (a much larger share than in any of its regional peers) (Figure 3.27) and where government debt is high, a durable reduction in expenditures is needed

[23] See Gaard and Kieler (2005).

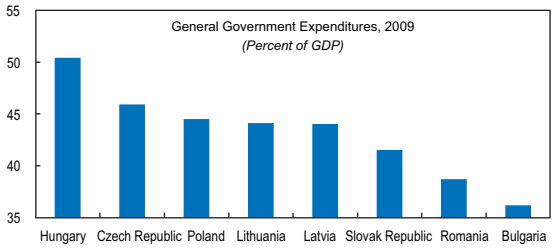
[24] Governments in Scandinavian countries (including Denmark and Sweden) promoted the "flexicurity" concept that combines high labor market flexibility in a dynamic economy with high social security for workers. This integrated strategy is becoming widely acknowledged as a way to preserve the European social model. The European Council of June 2009 concluded that flexicurity is an important means to "increase adaptability, employment and social cohesion" (European Council, 2009).

Figure 3.26
Netherlands and Sweden: Exports of Goods and Services, 1970–2010
(Percent of GDP)



Sources: Organization for Economic Cooperation and Development; and IMF staff calculations.

Figure 3.27
Hungary and Its Peers: Government Spending, 2009



Sources: IMF, World Economic Outlook database; and IMF staff calculations.

(IMF, 2011c).[25] For Italy, reforms may include improving the efficiency of fiscal expenditures and rationalizing the tax system to boost compliance and reduce the tax burden.

- *Initial reforms should focus on clearing the most restrictive bottlenecks.* Reducing duality in the labor market by lowering preferential protections for those with permanent contracts is a priority for Italy and Spain. Another priority, particularly for Italy, is to overhaul the regulatory framework to uproot a deeply antimeritocratic system that hinders competition by protecting insiders in industry, education, and the services sector.
- *Complementary fiscal reforms boost the success of other structural reforms.* Fiscal reforms could include reductions of the tax burden for labor, civil servant wage restraint, simplifications of the tax system, and widening of the tax base, all of which would improve popular buy-in and chances of success of other reforms.
- *Implementing structural reforms is a long process.* It is hard to get the right reforms in place in one stroke. Sometimes reform agendas develop gradually, in part because political economy considerations may suggest tackling problems sequentially. Reforms also take time to implement; for example, the privatization process in the United Kingdom took several years to complete. And reforms may need to be refined in the course of their implementation as constraints change.[26]
- *It takes time before reforms reap their full benefits, and initially conditions can worsen.* The Dutch reforms of the early 1980s took 10 years to come to full fruition. In Sweden, it was not until a decade after the reforms of the 1990s that a new peak performance was reached. In the United Kingdom, notwithstanding the labor market reform efforts, unemployment only began to fall sharply in the mid-1990s. Germany began serious wage moderation in 1995, but German GDP growth remained low for 10 years before export growth pulled the country out of its slump in 2005.

[25] This would include a rationalization of the public wage bill and social benefits as well as a restructuring of public transportation companies. The government has recently started a major program to achieve this objective.

[26] In the Netherlands, for example, an initial wage agreement led to a rapid increase in employment, primarily reflecting the absorption of new entrants, including women. However, the percentage of the working-age population receiving benefits had remained high, because the stock of inactive workers had changed little, and this prompted the need for further reforms, such as tightening of eligibility criteria.

Box 3.5

United Kingdom: Structural Reforms during the 1980s[1]

In the late 1970s, poor economic performance in the United Kingdom made the environment conducive to far-reaching reforms. Decades of relative decline had been exacerbated by a major recession after the first oil shock in 1973, high inflation partly owing to wage pressures and increasing government spending, and further deterioration in the economic situation. A severe balance of payments crisis in 1976 exposed further the weaknesses in the existing economic structure and made it clear that something needed to change.

The Thatcher government, which took office in 1979, and the following governments undertook sweeping structural reforms, including the following key elements:

- Reducing the state's role in the economy. The state's role was reduced through large-scale privatization of state-owned enterprises and public housing, cuts in civil service employment, and pension reforms that reduced the relative value of state pension benefits but created incentives to enroll in private pension schemes.
- Improving work incentives in benefit programs. Net unemployment benefits were reduced by abolishing the earnings-related supplement, suspending benefits' statutory indexation, and making their taxation less favorable. Eligibility criteria for receiving unemployment and other benefits were tightened. Job-seeking efforts were monitored via the 1986 "Restart Program," which required biannual counseling for all unemployed.
- Reforming the tax system. The number of bands for marginal rates of personal income tax was reduced, while rates themselves were lowered. Exemptions were reduced or eliminated and the taxation of capital income was streamlined. The share of indirect taxes was increased, and corporate profit taxes were lowered while their base was broadened.
- Reforming trade unions to make participation more voluntary. Reforms included extending the grounds for refusing to join a union, introducing limits on picketing, prohibiting actions that force contracts with union employers, and weakening the closed-shop and union immunities.
- Liberalizing financial markets. Administrative measures curbing bank lending and lending by building societies were removed, and pricing for financial services was liberalized.
- Promoting entrepreneurship and self-employment. The government introduced measures to foster self-employment, such as offering tax relief, facilitating bank borrowing for small companies, and establishing local agencies to counsel small businesses on planning, marketing, and design.

Unemployment was initially high, but growth and inflation began to improve in the early to mid-1980s, enabling the reforms to continue. Privatization also contributed to the rise in equity and home ownership, which may have created additional support for the reforms.

Although the impact of the reforms on economic performance remains subject to debate and some of the reforms remain controversial, there is consensus that the reforms contributed to halting the previous trend of relative decline in GDP levels per capita (for example, Card and Freeman, 2002; IMF, 2003), as the overall labor market and growth performance improved in the 1980s and 1990s. Microeconomic evidence—examining the impact of specific reform efforts on firm-level productivity—also suggests that structural reforms of the 1980s contributed to the United Kingdom's improved relative productivity performance (Card and Freeman, 2002).

Note: The main author of this box is Yan Sun.

[1] This box is based on Box 3.2 in Chapter III of IMF (2004), "Fostering Structural Reforms in Industrial Countries."

Research on a wider set of reform cases suggests that the cumulative gains in growth achieved from structural reforms in the trade, product market, and labor market areas are positive. However, they predominantly materialize only over the long term because they involve costly and painful reallocations of resources.[27]

- *Reforms need to adapt as constraints evolve.* As constraints are relaxed gradually and sequentially, new bottlenecks to growth may emerge in complicated and sometimes unpredictable ways. Countries therefore need to be prepared to shift and adapt the focus of their reforms.

The current reform agenda in Greece and Portugal largely follows the strategies of the early reformers. The response to the global financial crisis has been a consensus on the need for comprehensive reforms in a short timeframe. Under the EU-IMF-supported programs, Greece and Portugal have adopted fiscal consolidation and structural reforms in product, services, and labor markets. In Greece, for example, the fiscal deficit was targeted to shrink by 12¾ percentage points of GDP between 2009 and 2014 through cuts in wages and other spending and overarching tax reforms. Greece has begun to undertake strong labor market reforms; pension reforms; reforms to open up closed professions; reforms to simplify procedures for start-up and licensing; reforms in the approval processes for large investments; and reform of the education system. It also has plans for ambitious privatizations and judicial reforms. Its fiscal reform includes plans to reduce the high tax wedge on labor. In Portugal, growth and job creation take center stage. Portugal's reforms address the country's fundamental problem—low growth—with a policy mix based on restoring competitiveness through structural reforms, a balanced fiscal consolidation path, and financial stabilization. In addition to fiscal consolidation, reforms include a fiscally neutral reduction in labor taxes.

[27] See IMF (2004).

Extending the European Growth Frontier

Implementing reforms would both bring more countries closer to the European technology frontier and bring the European frontier itself closer to the United States. In 2010, average GDP per capita (purchasing power parity—PPP) in the EU was only 64 percent of the U.S. level, and only 85 percent for the three richest EU countries (Austria, the Netherlands, and Sweden) (Figure 3.28). The higher income in the United States is largely explained by its higher labor productivity—particularly in the information and communications technology (ICT) sector and services. In 2010, the level of employment of the United States was similar to that of Europe, although the number of hours worked per employee is still higher in the United States (Table 3.1).[28,29] Part of the difference in productivity levels can be attributed to lower human capital in ICT-related sectors and services (Figure 3.30). The large productivity gap in services also reflects a generally more regulated service sector in Europe (Figure 3.31).[30]

[28] Although Europe is catching up with the United States with slightly higher growth (for the period 1995–2010, EU15 average annual growth was 1.8 percent compared with 1.4 percent in the United States), its TFP growth is still below that of the United States. Compared with the United States, advanced EU economies have higher productivity growth in manufacturing, but lag behind in the ICT and services sectors (Figure 3.29).

[29] Gordon (2011) suggests that lower hours worked in Europe are due to high labor taxes, high minimum wages, and tight product market regulations.

[30] Gordon (2007) notably suggests that regulatory barriers and land-use regulations inhibiting the development of large retailers (such as Wal-Mart) as well as corporatist institutions designed to protect incumbent producers partly explain the lower labor productivity level in Europe compared with that of the United States.

Table 3.1

United States and EU15: Comparison of GDP Per Capita and Its Decomposition (2010)

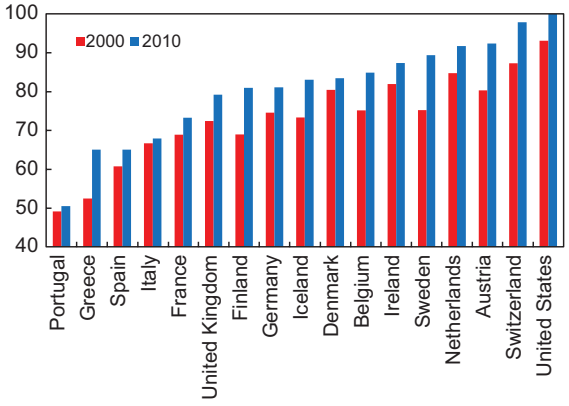
	GDP per capita (thousands of 2010 PPP US dollars)	Labor productivity per hour worked	Annual hours worked per worker	Employment as ratio of labor force[1]	Labor force as ratio of population
United States	46.8	61	1,690	0.91	0.50
Austria	43.2	53	1,634	0.93	0.54
Belgium	39.7	60	1,550	0.96	0.45
Denmark	39.0	50	1,528	0.97	0.53
Finland	37.9	48	1,700	0.94	0.50
France	34.3	56	1,561	0.92	0.43
Germany	37.9	55	1,418	0.94	0.52
Greece	30.4	35	2,034	0.98	0.44
Ireland	40.9	57	1,796	0.88	0.46
Italy	31.8	42	1,773	0.94	0.45
Luxembourg	88.6	83	1,491	1.64	0.44
Netherlands	42.9	61	1,372	1.00	0.51
Portugal	23.6	26	1,955	0.90	0.51
Spain	30.4	46	1,653	0.83	0.49
Sweden	41.8	53	1,597	0.97	0.52
United Kingdom	37.1	52	1,647	0.89	0.49
EU15 Average	40.0	52	1,647	0.98	0.48

Sources: Conference Board Total Economy Database, January 2011; EU AMECO database; and IMF staff calculations.
[1] 2007 figures.

Figure 3.28

United States and Selected EU Countries: Per Capita GDP, 2000 and 2010

(Index, United States 2010 PPP dollars = 100)



Sources: Conference Board Total Economy Database, January 2011; and IMF staff calculations.

Lower productivity may be linked to Europe's poorer performance in innovation. A few of the innovation leaders in Europe, such as Denmark, Finland, Germany, Sweden, Switzerland, and the United Kingdom, exhibit innovation performance that is similar to that of the United States in some categories (Figure 3.32).[31] But the United States excels in areas such as university-industry collaboration on R&D, high quality research institutions, availability of scientists and engineers, and government procurement of advanced technology products. In terms of innovation outcomes, the United States also far exceeds Europe in patents granted per capita.[32]

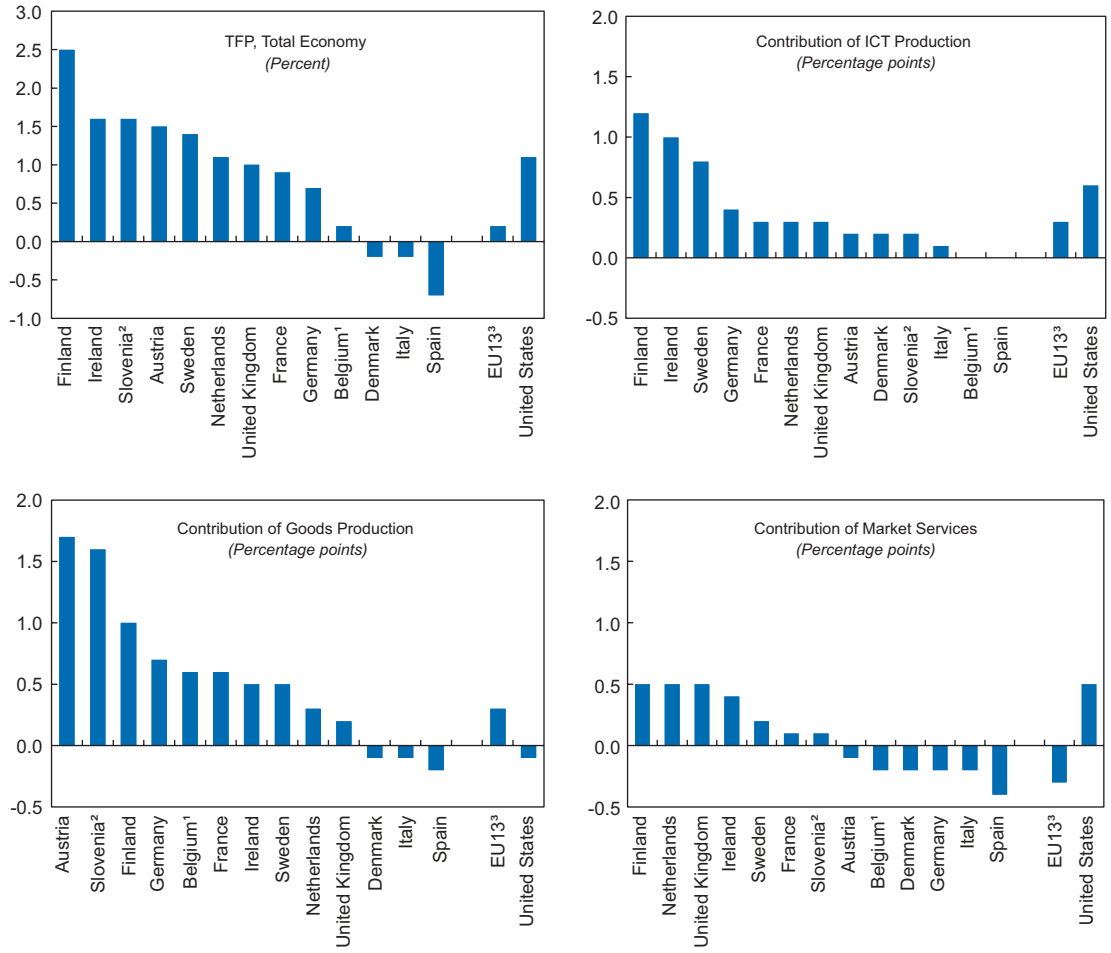
[31] Maastricht Economic and Social Research and Training Centre on Innovation and Technology (2011).

[32] As suggested by Gordon (2007), the environment is more favorable for innovation in the United States than in Europe, notably owing to an openly competitive system of private and public universities, government subsidies to universities based on peer-reviewed research grants rather than unconditional subsidies for free undergraduate tuition, strong patent protection, and a flexible financial infrastructure making available venture capital finance to promising innovations.

Figure 3.29

United States and Selected EU Countries: Contribution to TFP Growth of Major Sectors, 1995–2007

(Annual average growth rates)



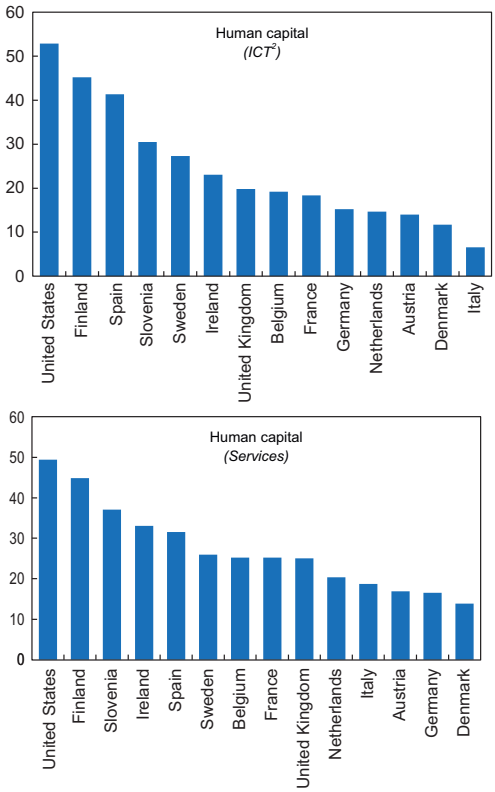
Source: KLEMS database.
Note: ICT production includes manufacturing of electrical and optical equipment, and post and telecommunication services. Goods production includes agriculture, mining, manufacturing (excluding electrical machinery), construction, and utilities.
[1]From 1995 to 2006.
[2]From 1996 to 2006.
[3]Data for EU13 refer to the 13 countries in the figure.

How could Europe bolster innovation?

- *Remove barriers to cross-border mergers and acquisitions.* Corporate restructuring can be a quick way to inject new innovative spirit into the domestic economy, particularly in those sectors where innovation follows a more radical pattern—where the ranking orders of innovators are unstable and entry rates of innovators are high.[33] Europe still has more pervasive barriers to corporate merger and control than the United States. Indeed, based on the last available data from the European

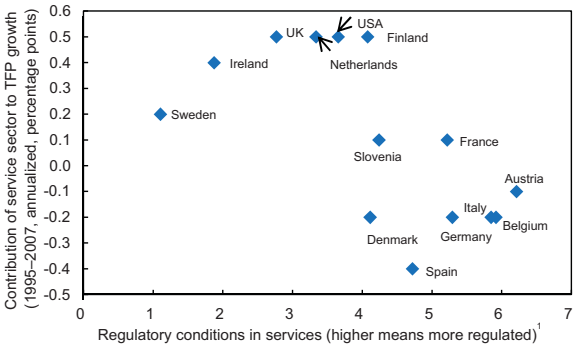
[33] Daminai and Pompei (2008) note that takeovers are more frequent in these sectors. External takeovers are less frequent in sectors that feature creative accumulation and a stable core of leading innovators, because they represent a break in the continuity of deepening innovation processes.

Figure 3.30
EU13 and United States: Human Capital Stock Comparisons, 2005 Level[1]
(Percent)



Sources: EU KLEMS database; IMF, World Economic Outlook database; and Organization for Economic Cooperation and Development Tax database.
[1]Human capital is proxied by the share of the labor force having completed tertiary education.
[2]Includes electrical and optical equipment, and post and telecommunication services.

Figure 3.31
United States and Selected EU Economies: Services Sector Contribution to TFP Growth (1995–2007) and Regulatory Conditions



Sources: EU KLEMS database; IMF staff calcuation; and Organization for Economic Cooperation and Development Product Market Regulation (PMR) database.
[1]Simple sum of indicator of regulatory conditions in retail trade and professional services.

Commission, in 2006, 77 percent of intra-EU merger and acquisition deals were domestic deals.[34] There is a need therefore to quickly implement the EU Directives for Cross-Border Acquisitions and Takeovers to remove the formal and informal national obstacles to the free flow of equity capital.

- *Improve access to risk capital to boost the innovation of new firms.* Europe has a relatively less-developed venture capital market. The constraints in access venture capital financing may have limited the growth of new firms, and helped protect incumbent firms. In the United States, where venture capital is more readily available, new firms have been a major source of innovation.[35] One—albeit controversial—option to improve access to risk capital would be through a redesign of EU industrial policy (Box 3.6). Recent studies (Aghion and others, 2011) suggest that subsidies would be more successful in promoting growth when they are targeted at sectors that are new, growing, and with intense intra-sector competition, and

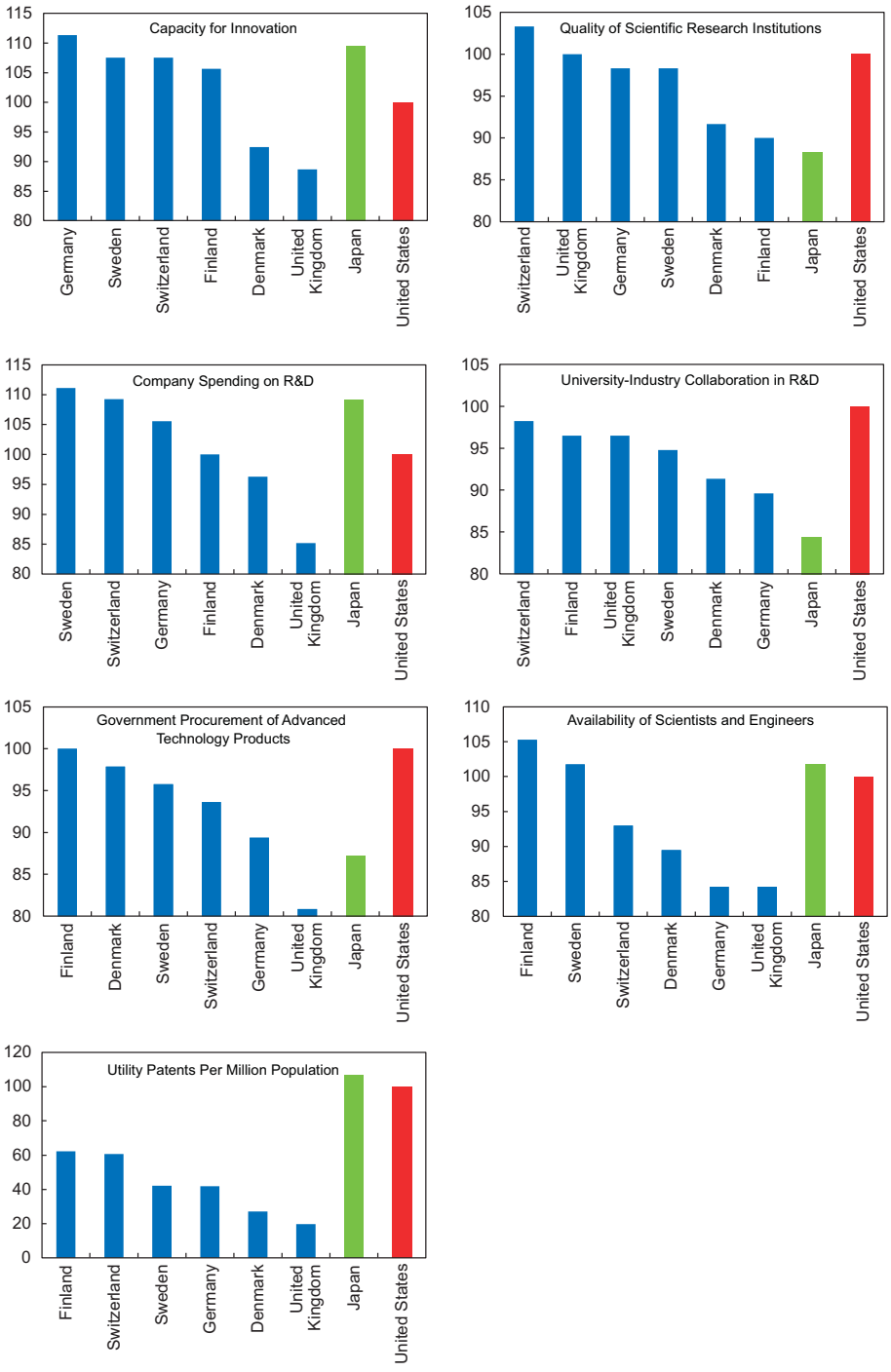
[34] European Commission (2007a).

[35] In the United States, of the 20 publicly listed companies with the highest market capitalization in 1967, only 11 were still in the top 60 at the beginning of 2004 (Gersemann, 2004).

Figure 3.32

United States, Japan, and Selected European Countries: Innovation Indicators, 2009–10 Weighted Average

(Higher numbers are better, United States = 100)



Sources: Executive Opinion Survey; World Economic Forum; and the United States Patent and Trademark Office.

Box 3.6

EU State Aid Policy and Industrial Policy

A key objective of EU industrial policy is to alleviate market failures. The policy is motivated by the need to correct market failures, such as (i) externalities in R&D investments; (ii) asymmetries of information in SME development; and (iii) agglomeration and network externalities as well as strategic trade considerations justifying sector-specific, cluster-specific, or "national champion"-specific support.

Current EU industrial policy is largely focused on horizontal measures—measures that target the economy as a whole—rather than on measures that support individual industries or firms. Aid is delivered mainly through horizontal measures for upstream R&D, such as support for R&D, SME development, education, environmental protection, and energy saving.

State aid to individual sectors or firms ("vertical support") has been decreasing in the EU27 countries, falling from 1.1 percent of GDP to 0.5 percent of GDP between 1992 and 2007.[1] These trends are the result of explicit policies limiting state aid in general, which is perceived as a threat to internal competition and integration, and policies limiting vertical support measures in particular, which are more prone to risk of capture by vested interests and rent-seeking, resulting in support to nonproductive "national champions."[2]

A recent study (Aghion, Boulanger, and Cohen, 2011) suggests that capital market imperfections and credit constraints limiting the reallocation of firms to new and more productive sectors justify a more active government intervention, with more direct support for sectors. Vertical support measures would have a stronger impact in countries and/or sectors closer to the technology frontier, but where bank credit is still the primary channel for company financing. Vertical measures are particularly effective when subsidies are targeted to highly contestable markets, as they force incumbent firms to innovate to keep up with competition of new entrants. Sectoral aid also works better when it is not concentrated. In other words, aid that enhances competition within a sector by not focusing on single firms or "champions" is more likely to be growth enhancing.

Note: The main author of this box is Gregorio Impavido.

[1] It then increased to 3.6 percent of GDP in 2009 as a consequence of the support provided to the financial sector during the financial crisis.

[2] In practice, however, horizontal support measures have not stopped vertical, sector-specific, state aid. On average, 70 percent of aid classified by the EU as horizontal is in fact awarded to the manufacturing sector (EIB, 2006), although a large variation exists among member states. Indeed, there are numerous cases of state aid where the primary objective is horizontal but the aid is limited to a certain industry, subsector or firms. In particular, aid is often directed to key incumbent firms, or clusters of firms, that have established their reputation as innovators, consequently reducing the contestability of the market and, therefore, incentives to innovate (Aiginger and Sieber, 2005).

when they are not concentrated in single firms or "champions."[36]

- *Develop capital markets more generally.* The bank-centric nature of the financial system of most European countries may be another factor that is holding back innovation and growth (IMF, 2006). Both supply- and demand-side bottlenecks hamper the development of capital markets in Europe. On the supply side, constraints on capital market financing include corporate governance problems.[37] In particular, problems include the weak enforcement of shareholder rights against insider trading;[38] the weak protection of creditor rights;[39] the concentrated shareholder ownership structure prevalent in most countries;[40] and the general absence of institutional investors among large shareholders.[41] On the demand side, constraints include weak judicial systems in enforcing private contracts,[42] which discourage firms from growing beyond the family-controlled scale.[43] Developing capital markets further is particularly important given the continued deleveraging by banks. With constrained access to credit for innovative firms, reforms aimed at diversifying the source of finance, especially for small start-up SMEs, could boost growth. Key areas of reforms include strengthening corporate governance rules and practices to encourage external private equity and venture capital finance; promoting the development of institutional investors to increase the supply of risky capital; and reforming the judicial system to encourage growth of family-owned SMEs.
- *Reduce the corporate tax burden in the context of a broader tax base.* This could stimulate innovation in established firms—particularly in countries with less-developed markets for risk capital. Indeed, there is empirical evidence that for Organization for Economic Cooperation and Development (OECD) countries, corporate tax has a disproportionately negative impact

[36] An example of these policies is the effort recently undertaken by France to support innovation and competitiveness. The tax credit for R&D activities (Crédit Impôt Recherche) provides generous incentives for research whereas the "Grand Emprunt" aims at supporting a variety of university-based and other research efforts in strategic sectors such as green energy, life science, and digital society and at promoting the creation and the financing of innovating (small and medium-sized enterprises—SMEs). Agencies and committees have also been set up to ensure objective allocation and efficient management of the funds. However, although spurring innovation has the potential to increase competitiveness and growth, the cost effectiveness of these measures needs to be evaluated within an appropriate timeframe. Strict adherence to rigorous governance standards is needed to ensure efficient and productive investments. In addition, other obstacles to innovation should be evaluated, such as those possibly arising from the relative paucity of medium-sized firms.

[37] Only Switzerland has a capital market comparable in relative terms to that of the United States, whereas the euro area capital markets tend to be smaller and on average comparable in size with the Japanese capital market.

[38] In particular, in Austria, Greece, Luxembourg, and the Netherlands (Djankov and others, 2007, 2008).

[39] In particular, in France, Greece, Ireland, Portugal, Sweden, and Switzerland (Djankov and others, 2007, 2008).

[40] With the exception of Ireland, Netherlands, Switzerland, and the United Kingdom (Hartmann and others, 2007).

[41] With the exception of countries such as Ireland, Sweden, Switzerland, and the United Kingdom (Hartmann and others, 2007).

[42] Especially in Greece and Italy (Box 3.4).

[43] A family-owned structure does not hinder productivity growth and innovation. The German "Mittelstand" (Germany's legion of small and medium-sized family firms contributing to 50 percent of GDP) is often seen as a good structure for innovation owing to its enviable distribution network, close partnerships with researchers at universities, highly skilled labor force, efficient supplier clusters around large manufacturers, harmonious employer-employee relationships, and high contribution (about 30 percent) to total exports that have not benefited SMEs in other countries such as France or Italy. However, even German SMEs find the need to hire foreign staff and raise new capital, perhaps via private equity, as a way to compete with firms abroad (Linneman, 2007).

on the TFP of established and large firms.[44] In addition, reducing corporate taxes could also encourage innovation in the most dynamic and profitable firms.[45] Because more profitable firms are better able to finance R&D—particularly in countries with less-developed markets for risk capital—lowering the effective corporate tax rate could allow such firms to invest more in R&D.[46] Finally, it could also attract more FDI, which tends to bring more productivity gains to domestic firms. The reduction in the tax burden should be combined with reforms to broaden the tax base and reduce loopholes.

- *Reduce regulation of services.* Relative to the United States, some European countries, including Germany, have a more heavily regulated service sector. In these countries, further liberalization could deliver quick gains in productivity growth.
- *Improve higher education and university-industry collaboration.* Europe's ability to innovate relies on the quality of its higher education (for example, human capital in ICT or the number of engineers and scientists) and its scientific research institutions. While more public funding may help, there should also be reforms in the governance of universities and other higher education institutions to increase their ability to attract funding and invest in R&D, as it has been recently attempted in Sweden (Box 3.7).[47] Finally, measures to encourage more university-industry collaboration, such as those to encourage the commercialization of university-held patents and technology, could help.

[44] See Johansson and others (2008), which shows that investment is adversely affected by corporate taxation. This is likely to have depressed TFP growth or innovation because of less spending on R&D and less FDI. In addition, these authors show that (i) employer and employee social security contributions have a more negative influence on TFP in industries that are relatively more labor intensive; (ii) top marginal personal income tax rates have a more negative effect on TFP in sectors characterized by high firm entry rates; and (iii) TFP in growing firms that are in the process of catching up with the technological frontier is particularly affected by corporate taxes, as these firms have on average a larger tax base.

[45] Molagoda and Perez (2011) found evidence that, in addition to human capital and the degree of market regulation, corporate tax rate (interacting with profitability) and trade openness affect TFP growth, based on data for EU13 and the United States for the period 1980–2007.

[46] The effect of corporate taxes is possibly negligible for young and small firms (which include a large share of start-ups), as they tend to have low or zero profits, even in highly profitable industries. The higher corporate tax rate in the United States, with the more developed market for risk capital, may explain why a much higher share of innovation is done by new firms.

[47] Aghion and others (2010) find a strong correlation between the governance structure of universities and their research and education output.

Box 3.7

Promoting Research and Innovation: Sweden's Research and Innovation Bill (2008)

In recent years, the Swedish government has clearly identified innovation as the key competitive factor in a knowledge-based economy, and has sought to maintain its position as one of the innovation leaders in Europe through public policy. In the 2008 Research and Innovation Bill,[1] the government introduced several new features that attempt to improve the quality of publicly funded research. They include the following:

- Linking funding to the quality of academic and research institutions. In a departure from old practices, quality, as measured by publications, references to publications, and external research funding (including industry contracts), determines how much public funding each university or higher education institution receives. This has introduced an element of competition and has tied public funds to those institutions that have proven ability in attracting external funds—an indication of strong research relevance.
- Promoting the commercialization of research. The government presented an initiative to increase the commercialization of research results. Dedicated funding is allocated for this purpose. Innovation offices have been set up at a number of higher education institutions.
- Boosting funding for strategic research with active industry participation. The bill planned a permanent, annual increase in funding to research in a number of strategically important areas, such as medicine, new technology (IT), and environment (energy). Sectoral R&D programs are based on calls for proposals in selected areas and involve active industry participation.

Note: The main author of this box is Yan Sun.

[1] Sweden's 2008 Research and Innovation Bill sets the framework for central government-funded research for the coming four years.

4. East-West Economic and Financial Linkages in Europe

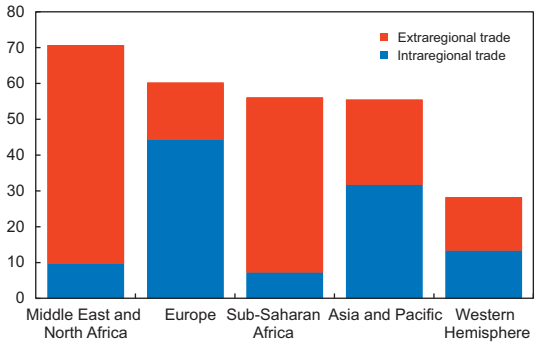
Trade and financial linkages between Western Europe and Central, Eastern, and Southeastern Europe (CESEE) have increased sharply over the past one and a half decades.[48] *Production chains of Central Europe have become integrated with those of Germany, and Western European banks have come to dominate banking systems in most CESEE countries. As a result, east-west spillovers have become much stronger and no longer go from west to east only. Financial shocks and trade shocks have become interdependent, with shocks to credit flows in one direction quickly followed by shocks to trade flows in the other direction.*

This chapter takes stock of the economic and financial ties between CESEE and Western Europe and assesses the associated spillovers. The first section documents stylized facts about trade, foreign direct investment (FDI), and banking linkages between the two parts of Europe. It goes on to quantify how shocks originating in Western Europe affect economic developments in CESEE and vice versa. A final section offers policy conclusions.

Stylized Facts

The economies of Europe are highly open and strongly trade-integrated with one another. Trade in goods is equivalent to about 60 percent of GDP—more than in any other region of the world, except for the Middle East and North Africa, where oil exports account for a large share of GDP (Figure 4.1). Three-fourths of European trade is trade within Europe, making its intraregional trade the largest of all regions in terms of GDP, as well as relative to total trade.

Figure 4.1
Selected Global Regions: Total Trade Flows, 2010
(Sum of imports and exports of goods relative to GDP, percent)



Sources: IMF, Direction of Trade Statistics; IMF, World Economic Outlook database; and IMF staff calculations.

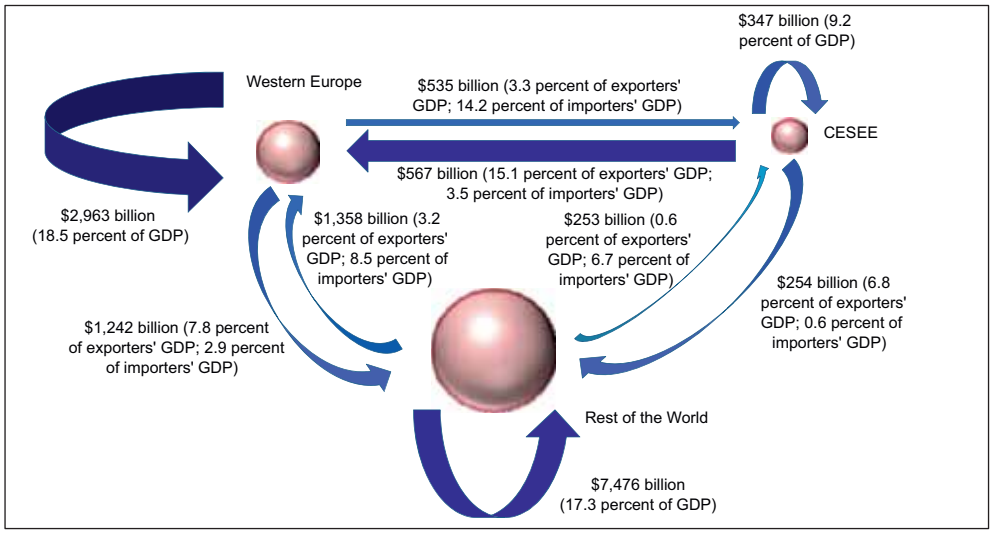
Western Europe dominates intra-European trade. The bulk of European trade takes place within Western Europe, and Western Europe is CESEE's premier export market. In 2010, Western European nations exported goods worth 18.5 percent of GDP to other Western European nations—more than twice as much as they exported to the rest of the world and far more than the 3.3 percent of GDP that went to CESEE (Figure 4.2). Conversely, Western Europe is easily CESEE's main trading partner, ahead of trade within CESEE, owing to its larger economic size.

CESEE's importance has increased rapidly. Economic and financial ties between the countries of Europe have become much stronger since the mid-1990s. The general globalization trend was accentuated by the liberalization of the economies in CESEE, the eastward expansion of the EU, the deepening of integration within the EU, and closer ties of the EU with non-members in the region. Moreover, the economies of CESEE grew much

Note: The main authors of this chapter are Özge Akıncı and Phakawa Jeasakul.

[48] The Western Europe and CESEE regions closely match the regions referred to elsewhere in this report as advanced and emerging Europe, with important exceptions. Western Europe comprises Austria, Belgium, Cyprus, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Malta, the Netherlands, Portugal, and Spain in the euro area; and Denmark, Iceland, Norway, Sweden, Switzerland, and the United Kingdom. CESEE comprises the Czech Republic, Hungary, Poland, the Slovak Republic, and Slovenia in Central Europe; Estonia, Latvia, and Lithuania in the Baltics; and Albania, Bosnia and Herzegovina, Bulgaria, Croatia, FYR Macedonia, Montenegro, Romania and Serbia in Southeastern Europe; and Belarus, Moldova, Russia, and Ukraine in the European CIS; and Turkey.

Figure 4.2
Europe and Rest of the World: Trade Flows of Goods, 2010[1]

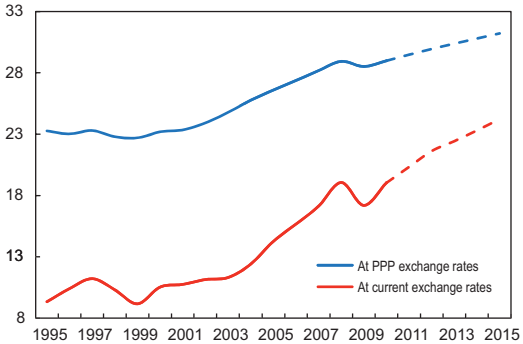


Sources: IMF, Direction of Trade Statistics; IMF, World Economic Outlook database; and IMF staff calculations.
[1]The thickness of arrows reflects the magnitude of trade flows relative to exporting country's GDP. The size of bubbles reflects the share of individual region's GDP in the world's GDP (Western Europe: 25 percent; CESEE: 6 percent; rest of the world: 69 percent).

faster than those of Western Europe, lifting their relative economic weight to almost 30 percent of Western Europe (Figure 4.3).

Western Europe's exports to CESEE are growing the fastest, and CESEE has become a more important export destination for Western Europe than the Asia and Pacific region or the Western Hemisphere (Figure 4.4). CESEE's role as a source for Western European imports has also increased rapidly, although it remains less important in that role than the Asia and Pacific region. CESEE sources a rapidly growing share of its own imports from the Asia and Pacific region, which now accounts for 15 percent of all CESEE imports, up from 6 percent in 1995.

Figure 4.3
CESEE: GDP Relative to Western Europe, 1995–2015[1,2]
(Percent)



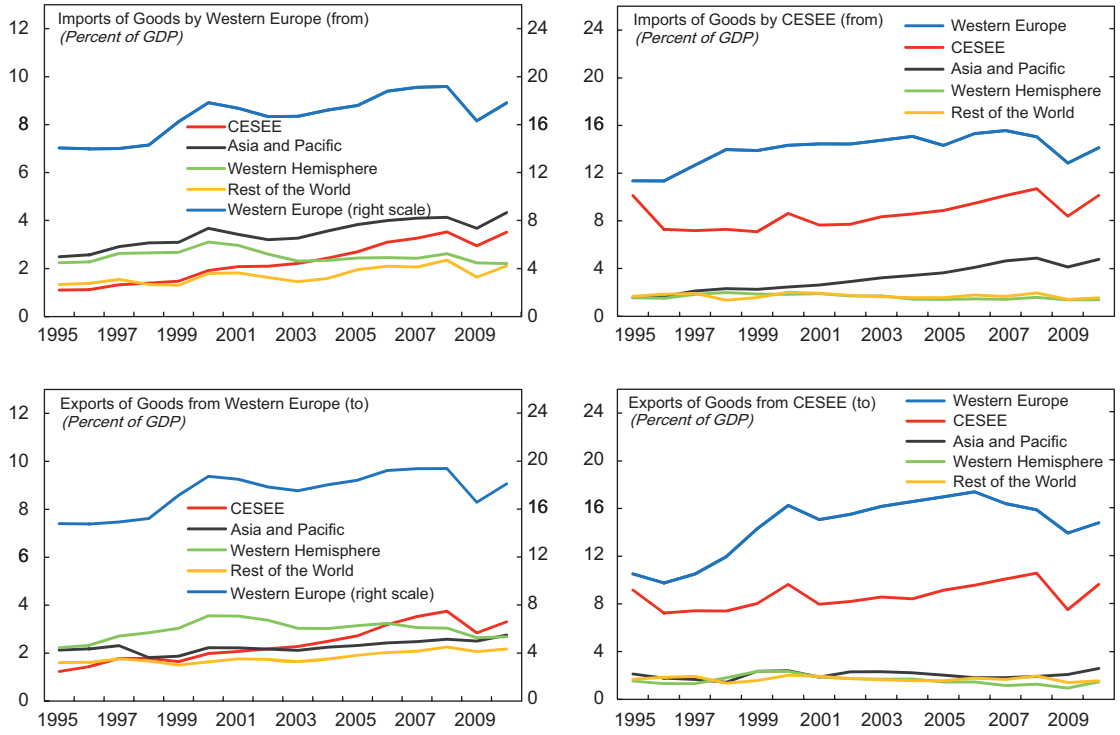
Sources: IMF, World Economic Outlook database; and IMF staff calculations.
[1]Includes Serbia from 1997; Bosnia & Herzegovina from 1998; Kosovo from 2000; and Montenegro from 2001.
[2]Projections from 2011.

Trade interconnectedness—Europe as a whole

Germany, Italy, and the Netherlands are the economies most tightly connected through trade linkages with the rest of Europe, but Hungary and Poland have begun to play important roles too. Trade interconnectedness is gauged by an index that takes into account trade flows relative to economic size, import and export market shares relative to what would be expected on the basis of relative economic sizes, and trade flows in absolute terms. For each country, it is measured by averaging that country's interconnectedness with all its partner countries in Europe or a subregion.[49] Looking at all

[49] Section (a) of the Annex describes in greater detail the construction of the trade interconnectedness index,

Figure 4.4
CESEE and Western Europe: Import and Export Shares by Region, 1995–2010



Sources: IMF, Direction of Trade Statistics; IMF, World Economic Outlook database; and IMF staff calculations.

intraregional trade in Europe, Western European economies are the ones most tightly connected in this way with their partner countries across the continent. Belgium, Germany, Italy, and the Netherlands come out on top (Table 4.1, column 1). However, Hungary and Poland also have leading positions and, indeed, score higher than many Western European economies.

Trade interconnectedness—East-West

Among countries of CESEE, those located in Central Europe and the Baltics are the most intertwined with Western Europe through trade. Focusing on trade flows with Western Europe, other countries from Western Europe (rather than from CESEE) show the highest degree of trade interconnectedness, indicating that trade ties within Western Europe are still stronger than between Western Europe and CESEE (Table 4.1, column 2). Poland and the Czech Republic are the two CESEE countries with the closest trade connections with Western Europe, although Russia is also important owing to its sizable energy trade. The importance of Central Europe, the Baltics, and Russia is also apparent from their relatively high trade in relation to their own GDP and/or that of their trading partners alone (Tables 4.2 and 4.3).

Among countries of Western Europe, Austria, Germany, and Italy are most enmeshed with CESEE through trade. Nevertheless, in trade with CESEE countries, economies from CESEE itself are again the most trade interconnected (Table 4.1, column 3), with Hungary, Russia, and Slovenia more involved in trade with CESEE than any country in Western Europe. The importance of Austria, Germany, and Italy is already apparent from their sizable trade with CESEE relative to their GDP. Trade between Germany and CESEE

which is based on the methodology for assessing trade interconnectedness in IMF (2011a).

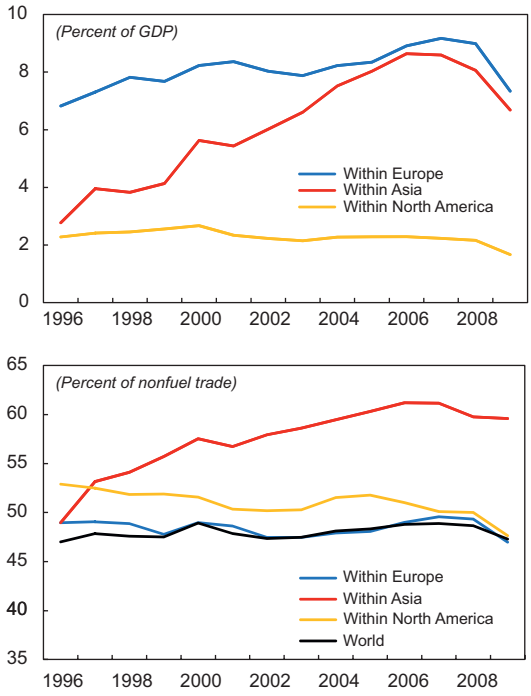
corresponds to 10.6 percent of CESEE's GDP and 12 percent of Germany's GDP. For Austria, trade with CESEE is equivalent to 16.6 percent of its GDP.

Cross-border production chains

Cross-border production chains appear to play an important role in Europe, but there is little evidence that they are being ramped up there as they are in Asia. The importance of cross-border production chains can be measured by the size of trade in intermediate goods.[50] In intra-European trade, they account for about 7 percent of GDP, which is higher than in Asia or in North America (Figure 4.5). However, this share has remained largely constant over time, in contrast to Asia, where it has been growing rapidly as the international division of labor has taken off (IMF, 2010d). This picture does not change dramatically if one focuses on trade between Western Europe and CESEE. Again, the share of intermediate goods trade remains rather constant over time (Figure 4.6).

Within the European cross-border production chain, Western Europe occupies an upstream position, that is, it contributes predominantly core components rather than specializing in final assembly. According to a study by Koopman and others (2010), the indirect exports of the old EU member states (the EU-15), representing exports used by importing countries to produce goods for export to third countries, are more important than the imported contents embodied in their exports. By contrast, for the EU's new member states (NMS), the relative importance of indirect exports and imports embedded in exports is reversed. In other words, on balance, EU-15 countries take the upstream position of the production chain, while the NMS occupy a more downstream position (Table 4.4). Similarly, Japan and the United States hold upstream positions in

Figure 4.5
Selected Global Regions: Intraregional Trade of Intermediate Goods, 1996–2009



Sources: IMF, World Economic Outlook database; United Nations Comtrade database; and IMF staff calculations.

Asia and North America, respectively, while newly industrialized countries and emerging markets in Asia, as well as Canada and Mexico, specialize in downstream activities.[51]

Germany and Central Europe hold key positions in cross-border production chains

Production chains between Western Europe and CESEE run primarily between Central Europe and Germany. The extent of intermediate goods trade varies dramatically between the different parts of CESEE and Western Europe. It exceeds 10 percent of GDP in the case of Central Europe and is also substantial in the Baltics (Figure 4.7). Its role is more subdued for Southeastern Europe and low

[50] Intermediate goods are the sum of the following categories in the Comtrade statistics: processed nonfuel industrial supplies (BEC 22), parts and accessories for capital goods (BEC 42), and parts and accessories for transportation equipment (BEC 53).

[51] Table 4.5 also indicates an upstream position for Russia. However, this primarily reflects Russian exports of energy and raw materials rather than critical intermediate goods.

Table 4.1

Europe: Degree of Trade Interconnectedness[1,2]

Within Europe		With Western Europe		With CESEE	
Germany	0.457	Netherlands	0.620	Hungary	0.467
Netherlands	0.382	Germany	0.570	Slovenia	0.406
Italy	0.353	Belgium	0.547	Russia	0.392
Belgium	0.327	United Kingdom	0.480	Austria	0.362
Hungary	0.308	France	0.404	Germany	0.354
Poland	0.296	Italy	0.383	Poland	0.353
Russia	0.288	Sweden	0.351	Ukraine	0.339
Austria	0.288	Denmark	0.345	Italy	0.325
Slovenia	0.278	Switzerland	0.322	Bulgaria	0.314
United Kingdom	0.264	Spain	0.313	Slovak Republic	0.306
Sweden	0.243	Norway	0.298	Serbia	0.292
France	0.235	Finland	0.248	Romania	0.269
Denmark	0.229	Poland	0.239	Belarus	0.261
Czech Republic	0.226	Luxembourg	0.219	Czech Republic	0.261
Slovak Republic	0.224	Ireland	0.211	Lithuania	0.250
Bulgaria	0.215	Austria	0.205	Macedonia, FYR	0.242
Lithuania	0.214	Czech Republic	0.192	Moldova	0.231
Romania	0.200	Iceland	0.190	Croatia	0.222
Finland	0.197	Russia	0.183	Latvia	0.208
Ukraine	0.186	Lithuania	0.178	Bosnia & Herzegovina	0.204
Serbia	0.183	Estonia	0.175	Turkey	0.181
Latvia	0.178	Portugal	0.152	Estonia	0.178
Estonia	0.176	Slovenia	0.150	Netherlands	0.168
Spain	0.169	Hungary	0.150	Greece	0.153
Switzerland	0.168	Latvia	0.147	Finland	0.151
Norway	0.163	Slovak Republic	0.142	Sweden	0.146
Croatia	0.157	Malta	0.135	Belgium	0.128
Macedonia, FYR	0.157	Romania	0.131	Denmark	0.124
Belarus	0.142	Bulgaria	0.117	Montenegro, Rep. of	0.119
Moldova	0.138	Greece	0.112	Albania	0.112
Turkey	0.135	Cyprus	0.109	France	0.082
Greece	0.134	Croatia	0.092	United Kingdom	0.070
Bosnia & Herzegovina	0.134	Turkey	0.089	Cyprus	0.047
Luxembourg	0.112	Montenegro, Rep. of	0.083	Norway	0.040
Iceland	0.107	Albania	0.078	Spain	0.038
Montenegro, Rep. of	0.101	Serbia	0.075	Malta	0.034
Ireland	0.100	Macedonia, FYR	0.072	Iceland	0.032
Albania	0.095	Bosnia & Herzegovina	0.064	Switzerland	0.029
Malta	0.081	Moldova	0.044	Luxembourg	0.015
Cyprus	0.076	Ukraine	0.033	Ireland	0.000
Portugal	0.072	Belarus	0.022	Portugal	0.000

Sources: IMF, Direction of Trade Statistics; IMF, *World Economic Outlook*; and IMF staff calculations.

[1] The index is the weighted average of indicators representing the importance of bilateral trade between countries within Europe. See section (a) of the Annex for more detail.

[2] Names of countries in Western Europe are in blue, and those in CESEE are in red.

Table 4.2

CESEE and Western Europe: Bilateral Trade, 2010

(Percent of CESEE country's GDP)

	Germany	Italy	Netherlands	France	United Kingdom	Austria	Belgium	Spain	Sweden	Finland	Switzerland	Greece	Denmark	Norway	Ireland	Portugal	Luxembourg	Cyprus	Malta	Iceland	**Total**
Czech Republic	40.9	5.5	6.9	5.7	4.8	6.4	3.5	2.7	1.7	0.6	1.9	0.3	1.0	0.9	0.4	0.4	0.2	0.1	0.0	0.0	**84.0**
Hungary	33.2	7.2	5.4	6.4	5.2	7.3	2.8	3.3	1.3	0.5	1.4	0.4	0.9	0.2	0.4	0.4	0.1	0.0	0.0	0.0	**76.6**
Slovak Republic	27.6	7.2	4.7	7.8	3.5	9.6	2.3	2.6	1.7	0.4	1.2	0.4	0.8	0.2	0.2	0.3	0.1	0.2	0.0	0.0	**70.8**
Slovenia	21.9	17.3	3.0	7.0	2.0	11.0	1.9	1.8	0.8	0.3	1.2	0.4	0.7	0.2	0.2	0.2	0.2	0.0	0.0	0.0	**70.0**
Estonia	11.0	2.5	3.6	2.7	2.6	0.7	2.0	0.9	15.5	17.3	0.6	0.1	2.6	2.9	0.2	0.1	0.0	0.1	0.0	0.2	**65.7**
Poland	19.4	4.5	3.8	4.0	3.3	1.5	2.2	1.7	1.8	0.6	0.7	0.2	1.1	0.7	0.3	0.2	0.1	0.0	0.0	0.0	**46.1**
Lithuania	12.2	3.2	5.3	3.5	3.7	0.6	3.2	1.2	3.8	1.6	0.4	0.1	2.6	1.7	0.3	0.2	0.1	0.0	0.0	0.5	**44.3**
Bulgaria	10.7	8.0	2.1	3.5	1.6	2.6	2.5	2.3	0.5	0.2	0.7	6.3	0.4	0.1	0.1	0.3	0.1	0.2	0.0	0.0	**42.4**
Macedonia, FYR	14.1	5.6	2.1	0.6	4.5	1.9	1.0	1.3	0.3	0.0	0.7	7.1	0.3	0.1	0.2	0.3	0.0	0.0	0.0	0.0	**40.1**
Romania	11.6	8.4	2.2	4.6	1.8	2.2	1.3	1.6	0.4	0.2	0.7	0.9	0.3	0.1	0.3	0.3	0.0	0.1	0.0	0.0	**37.2**
Latvia	8.6	2.3	2.6	1.8	2.3	0.6	1.4	0.8	3.9	2.8	0.9	0.1	2.3	1.4	0.3	0.1	0.0	0.2	0.0	0.1	**32.6**
Albania	1.9	16.8	0.7	0.4	0.3	1.0	0.2	1.4	0.2	0.1	0.3	5.4	0.1	0.0	0.1	0.0	0.1	0.0	0.0	0.0	**28.8**
Croatia	6.4	7.7	1.3	0.9	0.7	3.4	0.6	0.5	0.3	0.1	0.5	0.3	0.2	0.1	0.1	0.0	0.4	0.1	0.3	0.0	**24.2**
Bosnia & Herzegovina	7.5	7.4	0.9	0.7	0.3	4.5	0.5	0.6	0.3	0.0	0.5	0.4	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	**24.1**
Moldova	7.4	7.2	1.3	1.4	2.0	1.0	0.6	0.4	0.3	0.2	0.3	1.0	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	**23.9**
Serbia	6.3	5.7	1.2	1.3	0.6	2.7	0.7	0.5	0.0	0.1	0.6	1.0	0.3	0.0	0.2	0.0	0.0	0.1	0.0	0.0	**21.3**
Belarus	5.6	1.3	5.7	0.5	1.9	0.6	0.6	0.2	0.3	0.3	0.6	0.0	0.2	0.3	0.0	0.0	0.0	0.1	0.0	0.0	**18.4**
Turkey	4.4	2.3	1.2	1.9	1.6	0.3	1.0	1.1	0.4	0.2	0.6	0.3	0.2	0.1	0.1	0.1	0.0	0.0	0.1	0.0	**15.8**
Russia	4.6	1.7	2.3	1.5	0.7	0.4	0.8	0.7	0.6	1.1	0.2	0.4	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	**15.5**
Ukraine	5.1	3.0	1.3	1.0	0.7	1.1	0.6	0.6	0.2	0.4	0.6	0.2	0.3	0.2	0.0	0.1	0.0	0.1	0.0	0.0	**15.5**
Montenegro, Rep. of	2.0	4.4	1.2	0.5	0.2	2.2	0.2	0.5	0.1	0.0	0.3	3.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**15.0**
CESEE	**10.6**	**3.6**	**2.7**	**2.6**	**1.8**	**1.7**	**1.3**	**1.2**	**0.9**	**0.8**	**0.6**	**0.5**	**0.4**	**0.3**	**0.1**	**0.1**	**0.1**	**0.0**	**0.0**	**0.0**	**29.3**

Sources: IMF, Direction of Trade Statistics; IMF, World Economic Outlook database; and IMF staff calculations.

Table 4.3

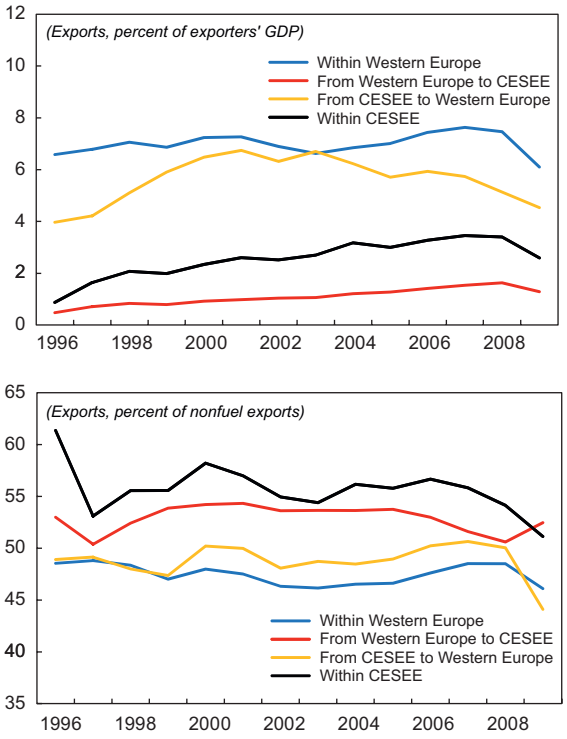
CESEE and Western Europe: Bilateral Trade, 2010

(Percent of Western European country's GDP)

	Russia	Poland	Czech Republic	Turkey	Hungary	Slovak Republic	Romania	Slovenia	Ukraine	Bulgaria	Lithuania	Croatia	Estonia	Belarus	Serbia	Latvia	Bosnia & Herzegovina	Macedonia, FYR	Albania	Moldova	Montenegro, Rep. of	**Total**
Austria	1.7	1.9	3.3	0.6	2.5	2.2	0.9	1.4	0.4	0.3	0.1	0.5	0.0	0.1	0.3	0.0	0.2	0.0	0.0	0.0	0.0	**16.6**
Netherlands	4.3	2.3	1.7	1.1	0.9	0.5	0.5	0.2	0.2	0.1	0.2	0.1	0.1	0.4	0.1	0.1	0.0	0.0	0.0	0.0	0.0	**12.8**
Finland	6.9	1.2	0.5	0.5	0.3	0.1	0.1	0.1	0.2	0.0	0.2	0.0	1.4	0.1	0.0	0.3	0.0	0.0	0.0	0.0	0.0	**12.0**
Germany	2.0	2.7	2.4	1.0	1.3	0.7	0.6	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	**12.0**
Belgium	2.5	2.2	1.4	1.6	0.8	0.4	0.5	0.2	0.2	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	**10.7**
Malta	0.0	0.4	0.3	5.2	0.3	0.1	0.4	0.1	0.4	0.1	0.1	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**9.6**
Sweden	2.0	1.9	0.7	0.6	0.4	0.3	0.2	0.1	0.1	0.1	0.3	0.0	0.7	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	**7.5**
Italy	1.2	1.0	0.5	0.8	0.5	0.3	0.7	0.4	0.2	0.2	0.1	0.2	0.0	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.0	**6.5**
Greece	1.9	0.3	0.2	0.8	0.2	0.1	0.5	0.1	0.1	1.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.2	0.2	0.0	0.0	**5.9**
Denmark	0.8	1.7	0.6	0.5	0.4	0.2	0.1	0.1	0.1	0.1	0.3	0.0	0.2	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	**5.3**
Cyprus	0.3	0.5	0.5	0.0	0.2	0.6	0.6	0.1	0.6	0.3	0.0	0.4	0.1	0.3	0.1	0.3	0.0	0.0	0.0	0.0	0.0	**4.9**
Switzerland	0.7	0.6	0.7	0.8	0.4	0.2	0.2	0.1	0.2	0.1	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**4.2**
Luxembourg	0.4	1.0	0.6	0.5	0.3	0.2	0.1	0.2	0.0	0.1	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**4.1**
Iceland	0.9	0.7	0.2	0.2	0.1	0.0	0.0	0.0	0.2	0.0	1.3	0.0	0.3	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	**4.0**
France	0.8	0.7	0.4	0.6	0.3	0.3	0.3	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**3.8**
Spain	0.7	0.6	0.4	0.6	0.3	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**3.2**
United Kingdom	0.4	0.7	0.4	0.5	0.3	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**3.0**
Norway	0.7	0.8	0.4	0.2	0.1	0.0	0.1	0.0	0.1	0.0	0.2	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	**2.9**
Ireland	0.3	0.6	0.4	0.4	0.2	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**2.6**
Portugal	0.3	0.4	0.4	0.4	0.2	0.1	0.2	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**2.3**
Western Europe	**1.4**	**1.3**	**1.0**	**0.7**	**0.6**	**0.4**	**0.4**	**0.2**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**6.9**

Sources: IMF, Direction of Trade Statistics; IMF, World Economic Outlook database; and IMF staff calculations.

Figure 4.6
CESEE and Western Europe: Trade of Intermediate Goods in Europe, 1996–2009



Sources: IMF, World Economic Outlook database; United Nations Comtrade database; and IMF staff calculations.

for the European CIS countries. From Western Europe's perspective, intermediate goods are much more prominent in Germany's trade than in that of other Western European countries. The growing importance of cross-border production chains for Central Europe and Germany is also reflected in a high rate of import growth relative to domestic demand growth in these countries.

Cross-border production between Germany and Central Europe primarily involves transportation equipment and capital goods, which account for more than half of the trade between these countries. For automobiles, which account for 14 percent of German exports to Central Europe and 18 percent of Central Europe's exports to Germany, two-thirds of German exports are parts and components, whereas the remaining third is final vehicles. For Central Europe, the composition is about 50 percent each. Production chains are highly interwoven and Central Europe does not act simply as an assembly location. Nevertheless, Germany supplies more intermediate inputs. This pattern of production chains broadly applies to electrical equipment and other machinery as well.

FDI of Western Europe in CESEE is sizable, further boosting East-West trade

FDI also binds the economies of Western Europe and CESEE together. While the FDI of CESEE countries in Western Europe is negligible, its flow in the other direction became substantial as CESEE economies liberalized, state-owned enterprises were put up for sale, their domestic markets became attractive for retail activity, and cross-border productions chains were set up. FDI in CESEE comes almost exclusively from Western Europe and reaches a considerable size, especially in Bulgaria, the Czech Republic, Estonia, Hungary, and the Slovak Republic (Figure 4.8). Over time, the destinations of this investment changed as the appeal of Southern Europe started to pale in comparison with that of CESEE. For example, German FDI flows into CESEE were strong during 2007–10, but negative in Portugal (Figure 4.9).

FDI linkages tend to reinforce and cement trade linkages over time. FDI in the tradable sector boosted CESEE's imports and exports. A sizable part of FDI was directed toward the tradable sector as firms from Western Europe outsourced parts of their production processes to CESEE. Once production facilities in CESEE came onstream, they sourced inputs from their western parents and shipped much of their output back to Western European markets. FDI in the nontradable sector did not boost CESEE's exports, but did lead to increase of imports—at least in the short term.

Banking system linkages are strong—much of CESEE's banking system is owned by Western European banks

Financial linkages of Western Europe with CESEE increased rapidly from 2003 onward. Western

Table 4.4

Selected Countries: Measures of Vertical Specialization across Borders, 2004

	Imported contents embodied in gross exports (percent)	Indirect exports sent to third countries (percent)[1]	Upstream or downstream position[2]
Asia			
Japan	12.2	30.8	2.5
Hong Kong	27.5	19.5	0.7
Philippines	41.9	29.4	0.7
Korea	33.9	23.1	0.7
Taiwan	41.4	27.2	0.7
Malaysia	40.5	25.0	0.6
Thailand	39.7	18.4	0.5
China	35.7	12.5	0.4
Europe			
Russia	10.2	31.2	3.1
European Union (EU-15)	11.4	20.9	1.8
EU New Member States	30.8	11.3	0.4
North America			
United States	12.9	26.9	2.1
Canada	28.1	12.2	0.4
Mexico	48.0	10.0	0.2

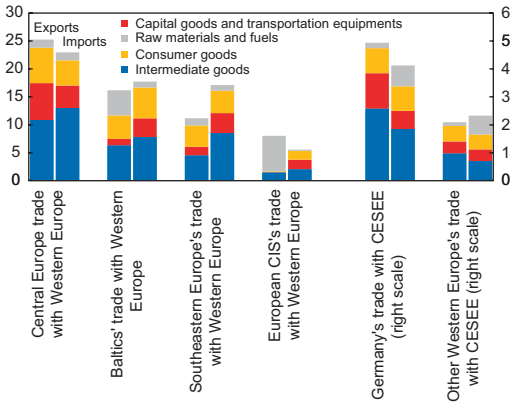
Sources: Koopman and others (2010); and IMF staff calculations.
[1] Includes indirect exports that return to home country.
[2] Based on indirect exports sent to third countries divided by imported contents embodied in gross exports.

banks acquired subsidiaries in CESEE to which their head offices would extend ample financing for local credit expansion. Direct cross-border lending to nonbanks in CESEE also took off. As a result, exposure of BIS-reporting banks, most of them headquartered in Western Europe, became large relative to the size of CESEE banking systems, easily exceeding 50 percent of local banking system assets in a number of countries (Figure 4.10). The importance of Western Europe's banks to CESEE is even greater when the locally funded assets of Western European-owned subsidiaries are also taken into account. According to that yardstick, Western Europe's banks account for the vast majority of banking sector assets everywhere in CESEE, except in Turkey and the European CIS countries (Figure 4.11). Austrian-owned, French-owned, and Italian-owned banks are particularly active in CESEE.

Reverse financial linkages from CESEE to Western Europe are much less pronounced. While Western European banks dominate CESEE banking systems, their operations in the region make up only a small fraction of Western Europe's banking systems, and their asset exposure to CESEE represents less than 3 percent of their assets on average (Figure 4.12). Only the CESEE operations of Austrian and Greek banks are considerable relative to their domestic banking systems, corresponding to about 30 percent and 15 percent of their assets, respectively. The funding of banks in the west from CESEE sources, mainly in the form of nonbank deposits, is also small relative to the funding provided by Western European banks to CESEE and especially relative to the size of Western Europe banking system assets.

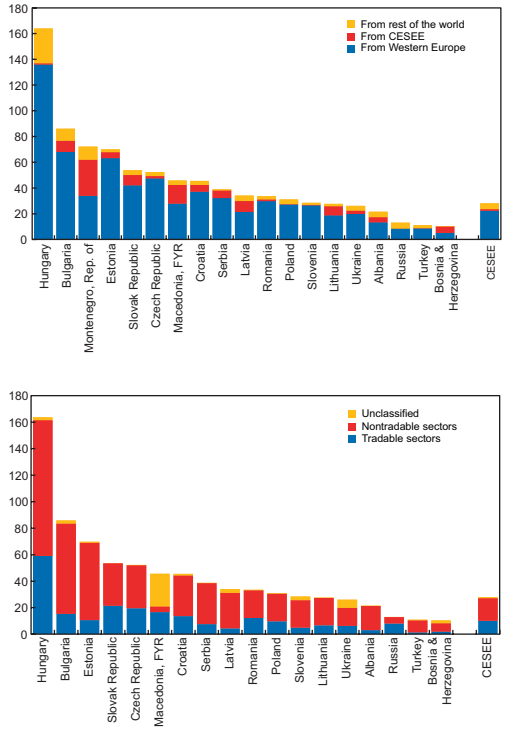
The expansion of Western European banks in CESEE boosted Western Europe's exports. Much of the ample financing that was made available by Western Europe's banks to CESEE during the boom period of 2003–08 was spent on imports

Figure 4.7
Selected European Regions: Imports and Exports between CESEE and Western Europe by Components, 2009
(Percent of GDP)



Sources: IMF, World Economic Outlook database; United Nations Comtrade database; and IMF staff calculations.

Figure 4.8
CESEE: Inward Foreign Direct Investment Stock by Origins of Funds and Sectors, 2008[1,2]
(Percent of GDP)



Sources: Central banks of Russia and Turkey; IMF, *International Financial Statistics*; IMF, World Economic Outlook database; Vienna Institute for International Economic Studies (wiiw), Database on Foreign Direct Investment; and IMF staff estimates.
[1]The number of total stock is based on international investment position data; the composition is based on the breakdown available from wiiw data.
[2]The tradable sector comprises agriculture, manufacturing, mining, and trade. The nontradable sector comprises communication and transportation, construction, financial intermediation, real estate, and utilities.

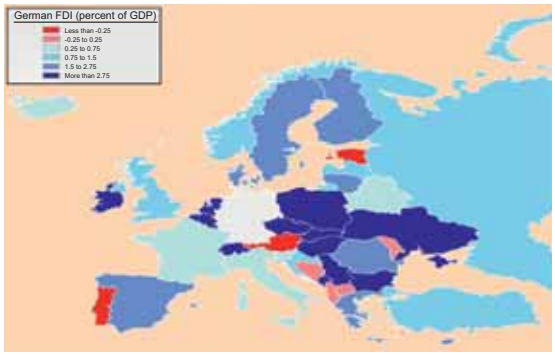
from Western Europe. The more financing CESEE countries received from western banks, the stronger their imports from Western Europe grew. An estimated 57 cents per euro of western bank financing ended up being spent on imports from Western Europe (Figure 4.13). The boom period boosted trade and financial exposure at the same time, just as the slump in the wake of the global financial crisis dealt a simultaneous blow to both.

Spillovers and Quantifications

Economic and financial linkages between the two parts of Europe are obviously significant, but what can be said about the strength of spillovers from economic developments in Western Europe to CESEE and vice versa? Europe's experience in the run-up to and the aftermath of the global financial crisis suggests that spillovers are large. For example, exports to CESEE lifted Germany's annual export growth during 2003–08 from 6½ percent to 8¼ percent, thereby directly adding ¾ percentage points to GDP growth. And in the 2009 recession, exports to CESEE worsened the contraction of Germany's exports from 16¼ percent to 12¼ percent. This directly added 1¾ percentage points to the fall of German output.[52] Similarly, because buoyant financing from western banks during 2003–08 played a pivotal role in CESEE's economic boom, the sudden end of that financing from late 2008 helped plunge the economies of CESEE into a deep recession (Bakker and Gulde, 2010).

[52] During 2003–08, Germany's GDP grew by an annual average of 1.9 percent. In 2009, it contracted by 5.1 percent. The quantifications of the contributions from exports to CESEE are meant to give a sense of the orders of magnitude involved. They do not take into account second-round effects through changes of income and imports.

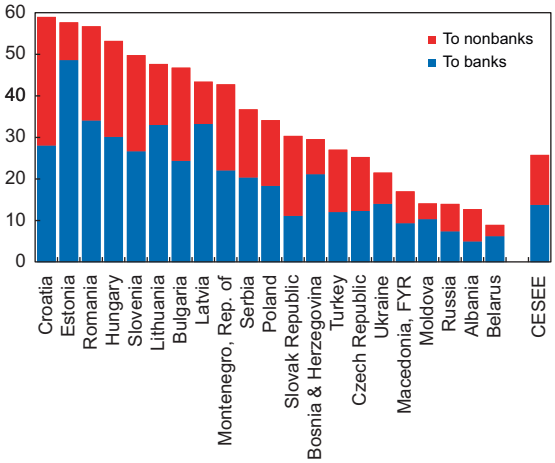
Figure 4.9
Europe: Accumulated German Foreign Direct Investment, 2007–10
(Percent of recipient country's average GDP)



Sources: Deutsche Bundesbank; IMF, World Economic Outlook database; and IMF staff calculations.

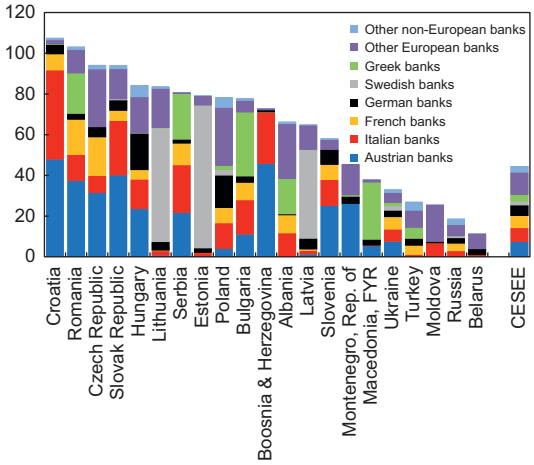
This section offers three approaches for the quantification of spillovers. First, it quantifies the size of output spillovers through the trade channel based on import elasticities and the structure of bilateral trade relationships. Second, it employs a vector autoregression (VAR) framework to study the dynamics of growth shocks originating in one part of Europe on GDP in the other part of Europe. Third, it uses a dynamic panel regression to quantify the effects of a funding shock from

Figure 4.10
CESEE: Funding from BIS-Reporting Banks, 2010
(BIS-reporting banks' exposure relative to banking system's total assets, percent)



Sources: BIS, Locational Banking Statistics (Table 6); IMF, *International Financial Statistics*; and IMF staff calculations.

Figure 4.11
CESEE: Consolidated Claims of BIS-Reporting Banks by Country of Bank Ownership, 2010
(Relative to banking system's total assets, percent)



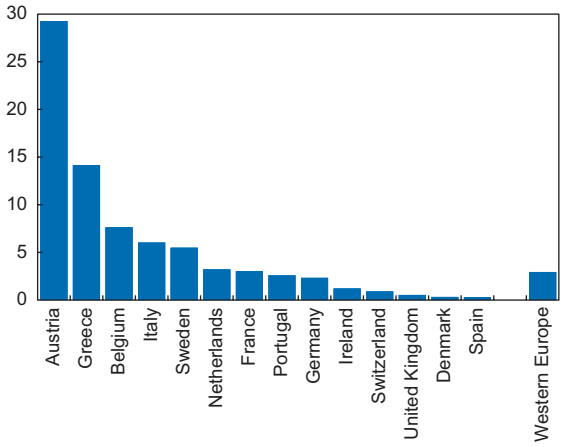
Sources: BIS, Consolidated Banking Statistics (Table 9B); IMF, *International Financial Statistics*; and IMF staff calculations.

Western European banks on credit growth and economic growth in CESEE.

Spillovers through the trade channel are considerable, ranging from 0.3 percent to 2.4 percent additional growth in individual countries for a 1 percent growth shock in the rest of Europe. The quantification exercise first estimates the effect of an output shock on countries' imports and then calculates the effect on partner countries' exports using historical trade shares. Their export multipliers are set equal to 1—essentially assuming that income effects are offset by higher imports of final goods and intermediate inputs embedded in exports.[53] On this basis, spillovers can be quite high, especially for small, highly-open economies, such as Malta and Moldova.[54] Larger economies that have considerable trade relations with non-European countries, such as Russia and Turkey, are subject to much lower spillovers (Figure 4.14). Aggregation across the countries of Western Europe and

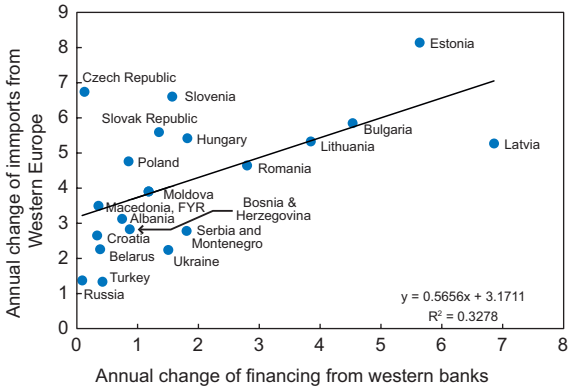
[53] Section (b) of the Annex explains the methodology, based on that in the U.S. Spillover Report (IMF, 2011h), in more detail.
[54] Spillover coefficients can exceed one as shocks to trading partners' GDP tend to raise their imports more than one-for-one.

Figure 4.12
Western Europe: Consolidated Claims of BIS-Reporting Banks on CESEE by Country of Bank Ownership, 2010[1]
(Relative to banking system's total assets, percent)



Sources: BIS, Consolidated Banking Statistics (Table 9B); IMF, *International Financial Statistics*; and IMF staff calculations
[1]Total assets for Western Europe do not include Norway due to data unavailability.

Figure 4.13
CESEE: Funding from Western Banks and Imports from Western Europe, 2003–08[1]
(Percent of GDP)



Sources: BIS, Locational Banking Statistics (Table 6); IMF, Direction of Trade Statistics; IMF, World Economic Outlook database; and IMF staff calculations.
[1]For Estonia, Latvia and Lithuania, 2002–07.

CESEE suggests that a 1 percent growth shock in Western Europe would add 0.4 percentage point to growth in CESEE. Conversely, a 1 percent growth shock emanating from CESEE would entail additional growth of just 0.1 percentage point in Western Europe.

Western growth shocks are felt one-for-one in the CESEE

The VAR framework confirms strong spillovers from Western Europe to CESEE, but reverse spillovers are manifest only when they emanate from Central Europe. The exercise explains growth in Western Europe and CESEE in terms of past growth in the two parts of Europe while controlling for growth in the rest of the world. It then studies the dynamic response of growth in one part of Europe to a growth shock in the other part of Europe.[55] A growth shock in Western Europe essentially translates one-to-one into additional growth in CESEE (Figure 4.15, panel 1). The effects on Central Europe and the rest of CESEE seem to be in the same order of magnitude, although the effect on Central Europe has higher statistical significance (Figure 4.15, panel 2). A growth shock in CESEE has no significant effect on growth in Western Europe (Figure 4.15, panel 3). However, given the closer ties between Central Europe and Western Europe, a shock emanating from the former does have a statistically significant effect on the latter. Over time, growth in Western Europe is lifted by about one-third of the increase in growth in Central Europe (Figure 4.15, panel 4).

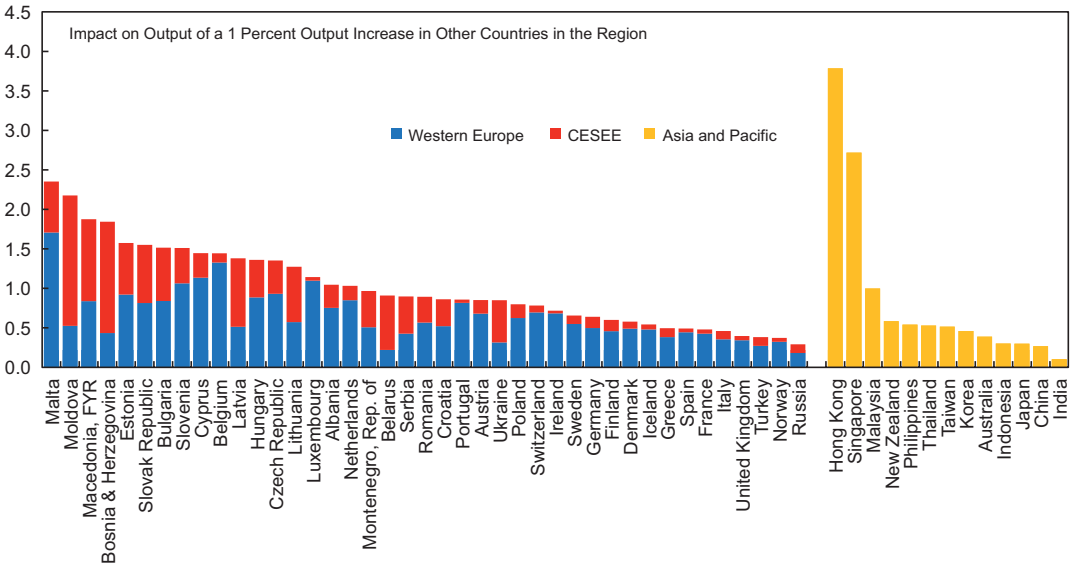
Funding shocks from western banks have a big impact on credit in CESEE

Funding from western banks has a strong impact on credit and domestic demand growth in CESEE. The exercise first estimates the dynamic response of credit expansion to changes in the exposure of western banks to banks in CESEE countries, using data on 15 countries in the region during 2003–10.[56] Over time, about 80 percent of any exposure increase is found to translate into additional credit

[55] Section (c) of the Annex explains the methodology in more detail.

[56] Suitable data for the other CESEE countries are not available. Section (d) of the Annex explains the methodology in more detail.

Figure 4.14
Asia and Europe: Impact of Output Spillovers through the Trade Channel[1]
(Percent)



Sources: IMF, Direction of Trade; IMF, World Economic Outlook database; United Nations Comtrade database; and IMF staff calculations.
[1]Section (b) of the Annex explains the methodology of the analysis.

(Figure 4.16, panel 1). In a second step, the exercise considers the association of credit growth with domestic demand and GDP. Over time, a 1 percentage point increase in real credit growth is associated with a 0.35 percentage point increase in real domestic demand and a 0.28 percentage point increase in real GDP (Figure 4.16, panel 2). Putting the two steps together suggests that the financial spillovers from western banks to economic activity in CESEE are strong. Indeed, the financing provided by western banks during 2003–08 added 1½ percentage points to CESEE's annual GDP growth according to these estimations.[57]

Despite the pivotal role of western banks in CESEE's banking systems, several factors mitigate concerns that financial stability in CESEE would be at risk in an adverse scenario where western banks came under intense strain at home; for example, in the context of a sharp escalation of the tension in euro area debt markets. Multiple lines of defense in home and host countries and the experience during the 2008/09 crisis suggest that such severe spillovers would not materialize easily. Pressured western banks would in the first instance turn to support available at home, such as liquidity from the ECB against eligible collateral, emergency liquidity assistance from their central banks, and any government support schemes that would be put in place under the circumstances. Scope for obtaining funding from their subsidiaries in CESEE would be rather limited, as host supervisors would step in if compliance with liquidity and capital ratios of subsidiaries were at risk. Violations would ultimately lead to a painful loss of managerial control by parent banks.

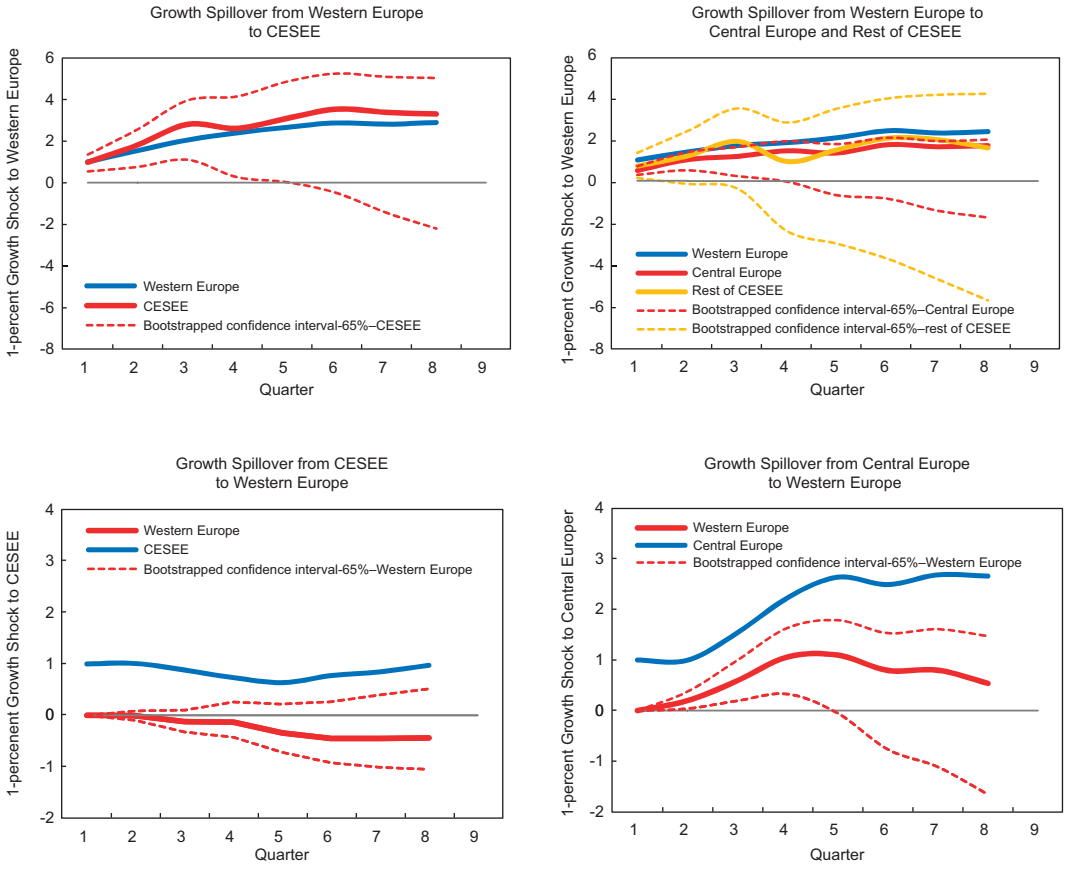
An adverse scenario would, however, likely trigger a renewed credit crunch, as western parent banks would persistently scale back their exposure to subsidiaries, and cross-border loans to nonbanks would be rolled over only sparingly. Moreover, unaffiliated banks in CESEE countries that rely heavily on wholesale funding could come under pressure. In sum, the outcome would not be unlike the experience during the global financial crisis in 2008/09 when CESEE escaped financial meltdown, and banking crises occurred only in the

[57] During this period, annual average growth in CESEE was 6½ percent.

Figure 4.15

Europe: Growth Spillovers between CESEE and Western Europe[1]

(Accumulated response of GDP, percent)



Sources: IMF, World Economic Outlook database; and IMF staff calculations.

[1]Section (c) of the Annex explains the methodology of the analysis.

two countries where reliance of local banks on wholesale funding was particularly high (Latvia and Ukraine).

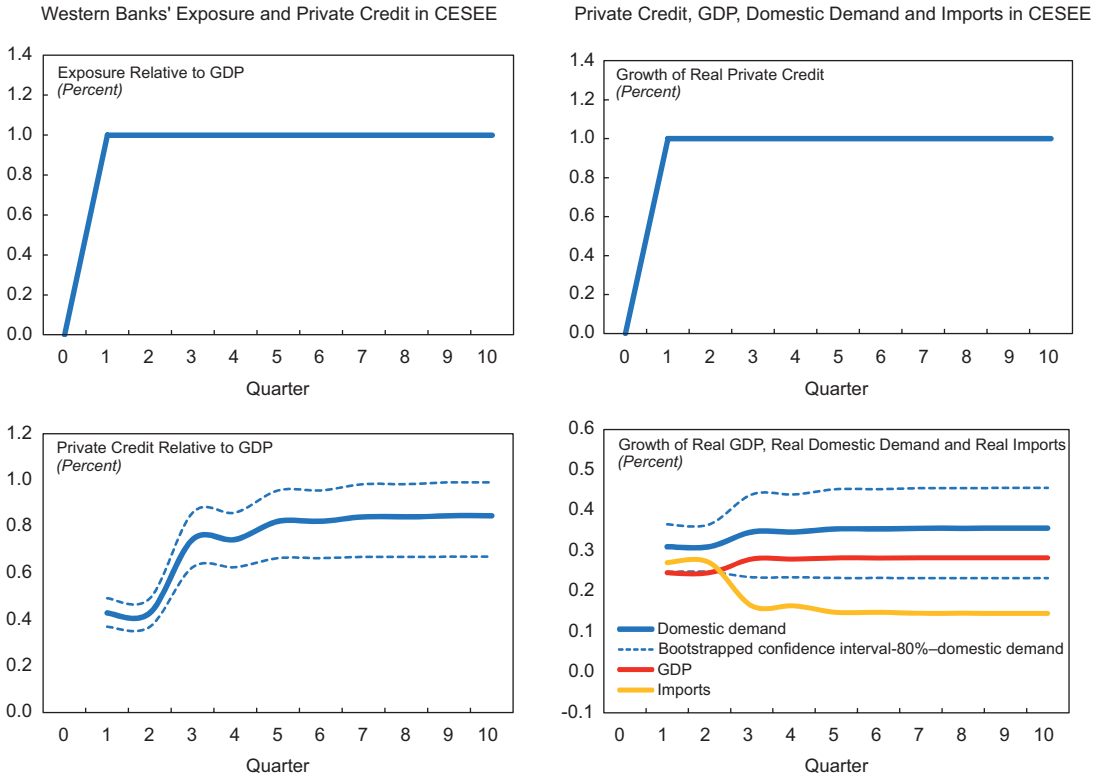
Policy Implications

Linkages give rise to good and bad spillovers…

Spillovers, which are the inevitable side effect of linkages, entail challenges for policymakers. Strong linkages mean that economic developments and policies in one part of Europe have considerable repercussions in other parts. This by itself is neither good nor bad, because favorable developments can spill over as much as unfavorable ones can. However, it complicates macroeconomic policymaking, because when economies are buffeted by far-away shocks, traditional policy tools might become less effective and business cycles are amplified. For example, the guardians of financial stability in Western European countries with banking sectors heavily exposed to CESEE need to monitor possible repercussions for the domestic financial system closely. Conversely, policymakers in CESEE might find it difficult to control a credit boom through traditional monetary policy tools if domestic banks have ample access to financing from foreign parent banks. And the interactions

Figure 4.16

Europe: Credit Spillovers from Western Europe to CESEE[1]



Sources: BIS, Locational Banking Statistics (Table 6); IMF, *International Financial Statistics*; IMF, World Economic Outlook database; and IMF staff calculations.

[1]Section (d) of the Annex explains the methodology of the analysis.

between financial and trade spillovers might exacerbate business cycles.

…as economies advance through cross-border integration…

These policy challenges should not distract from the fundamental benefits of economic and financial integration between Western Europe and CESEE. Tight integration is the result of economic liberalization and reform across CESEE, as well as in Western Europe, together with deliberate integration efforts as the EU expanded eastward. This has allowed countries to specialize according to their comparative advantages, firms to exploit economies of scale, and consumers to benefit as firms have faced stiffer competition. In particular, it has allowed western firms to extend their production chains to the east, thereby improving their competitiveness in global markets while contributing to the economic development of host countries. From this perspective, integration has been mutually beneficial and was rightly embraced by policymakers.

…and policymakers need to take note

Economic policies need to be fully attuned to the presence of spillovers to be effective. This requires three things. First, a broader range of economic and financial developments needs to be monitored and the linkages and associated spillovers have to be properly understood. This way, the domestic repercussions from seemingly far-away developments will not come as a surprise and can be addressed by domestic policies in a timely

manner. Second, policymakers need to switch to tools that are still effective in an interlinked economic setting. For instance, if traditional monetary policy could not contain the overheating associated with a foreign-funded credit boom, perhaps fiscal tightening and prudential measures—possibly coordinated with home supervisors—still could. Third, if linkages lead to an amplification of business cycles, policymakers must be prepared to use tools more aggressively.

Annex

(a) Constructing a Trade Interconnectedness Index

The trade interconnectedness index (TII) is the weighted average of indicators capturing the importance of bilateral trade between countries for a group of N countries. The weight reflects the closeness of trade relationships.

Specifically, the TII for country i is $TII_i = \frac{1}{N-1}\sum_j \frac{1}{closeness_{ij}} importance_{ij}$, where $importance_{ij}$ is the average of nine indicators gauging the importance of bilateral trade between country i and j, and $closeness_{ij}$ is the measurement of how directly two countries trade with each other.

The $importance_{ij}$ indicator is composed of nine different criteria, eight of which measure the importance of imports and exports relative to an individual country's economy as well as to that of trading partners. These include:

1. M_{ij}/Y_i and M_{ji}/Y_j
2. X_{ij}/Y_i and X_{ji}/Y_j
3. $(M_{ij}/M_i)/(Y_j/\bar{Y}_{\sim i})$ and $(M_{ji}/M_j)/Y_i/\bar{Y}_{\sim j})$
4. $(X_{ij}/X_i)/(Y_j/\bar{Y}_{\sim i})$ and $(X_{ji}/X_j)/Y_i/\bar{Y}_{\sim j})$,

where M_{ij} (X_{ij}) is imports (exports) of country i from (to) country j; M_i (X_i) is imports (exports) of country i; Y_i is GDP of country i; and $\bar{Y}_{\sim i}$ is aggregate GDP of all other countries except country i.

These individual indicators take the value of 1 (otherwise 0) when the underlying measurement exceeds the specified threshold, which is set at the 75th percentile for each criterion.

For the ninth criterion, the indicator is based on the size of bilateral trade: $(M_{ij} + X_{ij})$ relative to trade of all countries. For this indicator, the threshold is set at the 90th percentile to capture only substantial bilateral trade pairs.

The $closeness_{ij}$ measurement is based on the notion of how directly countries are connected through trade. The construction of this measurement consists of two steps.

The first step is to specify what could be considered an important trade linkage. The analysis takes the view that a bilateral trade linkage between country i and country j is important if the $importance_{ij}$ indicator takes the values of at least 4/9 (that is, four criteria specified above must be met). Then, two countries may be connected directly, or their connection may occur through third countries.

The second step is to count the distance between country i and country j, which in turn provides the value of $closeness_{ij}$, being defined as the inverse of the shortest distance. For example, if two countries share an important bilateral trade linkage and are thus connected directly, the shortest distance is 1 and the closeness is also 1. In contrast, if two countries are connected only through another country that has important trade linkages to both, the shortest distance is 2 and the closeness is ½.

Once both $importance_{ij}$ and $closeness_{ij}$ are constructed, the TII can be computed. This can be done for any specific group of countries. For instance, when the degree of trade interconnectedness of Europe as a whole is of interest, the TII is calculated based on all European countries. On the other hand, when the degree of trade interconnectedness with Central Europe is of interest, the TII is calculated with respect to countries in Central Europe (that is, computing the weighted average of $importance_{ij}$ where j represents all countries in Central Europe).

(b) Quantifying Output Spillovers through the Trade Channel

The analysis aims at quantifying the magnitude of output spillovers through the trade channel based on the structure of bilateral trade relationships within the region.

The analysis relies on two key assumptions. One is that the export multiplier (that is, the magnitude of output change due to export change) is equal to 1; thus, the analysis does not account for additional

output spillovers within the economy, leakages of domestic demand to imports, and intermediate imports essential for production. Another is that additional output spillovers across countries are not considered.

The analysis estimates the percentage change in output in country *i* owing to a 1 percent change in output in country *j*, which is denoted by $s_i|_j = \left(\frac{\Delta Y_i}{Y_i}\right) / \left(\frac{\Delta Y_j}{Y_j}\right)$, where Y_i and Y_j are output in country *i* and *j*, respectively.

Based on the assumption of unitary export multiplier, the change in output in country *i* results from the change in exports from country *i* to country *j* (owing to a change in output in country *j*), which is, in fact, imports from country *i* by country *j*. Then, $\left(\frac{\Delta Y_i}{Y_i}\right) = \theta_{ji}\left(\frac{\Delta M_j}{Y_i}\right) = \theta_{ji}\left(\frac{Y_j}{Y_i}\right)\left(\frac{\Delta M_j}{Y_j}\right) = \theta_{ji}\left(\frac{Y_j}{Y_i}\right)\left(\frac{M_j}{Y_j}\right)\left(\frac{\Delta M_j}{M_j}\right)$, where θ_{ji} is country *j*'s share of imports from country *i* and M_j is imports of country *j*.

Hence, $s_i|_j = \left(\frac{\Delta Y_i}{Y_i}\right) / \left(\frac{\Delta Y_j}{Y_j}\right) = \theta_{ji}\left(\frac{Y_j}{Y_i}\right)\left(\frac{M_j}{Y_j}\right)\varepsilon_j^M$, where ε_j^M is the output elasticity of imports, that is, $\varepsilon_j^M = \left(\frac{\Delta M_j}{M_j}\right) / \left(\frac{\Delta Y_j}{Y_j}\right)$. The value of $s_i|_j$ can be computed based on the structure of bilateral trade relationships reflected by θ_{ji}, the relative output ratio Y_j/Y_i, the import to GDP ratio M_j/Y_j, and the estimate for the output elasticity of imports ε_j^M. This is simply the regression coefficient of the percentage change in real imports on the percentage change in real GDP.

The analysis calculates the values of $s_i|_j$ for countries in Europe as well as in the Asia and Pacific region. Figure 4.14 presents the magnitude of output spillovers as a result of a 1 percent increase in output in all other countries in each region. This is simply the sum of $s_i|_j$ over all countries *j*.

(c) Growth Spillovers in a VAR Framework

The growth spillovers between Western Europe (WE) and CESEE are examined using a standard VAR framework containing quarterly real GDP growth for the sample period of 1997:Q2–2011:Q1, controlling for growth shocks that originated in the rest of the world (ROW). All major countries outside Europe are included in the VAR model to make sure that the estimated impulse responses purely reflect the spillovers between Western Europe and CESEE rather than reflecting similar responses to common global shocks.

For the purposes of this analysis, ROW includes the United States, emerging Asia (China, Hong Kong SAR, India, Indonesia, Korea, Malaysia, Philippines, Singapore, Taiwan Province of China, and Thailand), Japan and all other economies in the IMF's global projection model (Argentina, Australia, Brazil, Canada, Chile, Colombia, Israel, Mexico, New Zealand, Peru, South Africa, and Venezuela). PPP-based weights are used to construct the aggregate growth rates of ROW.

The following VAR models are estimated:

VAR-I: [*ROW*, *WE*, *CESEE*], and

VAR-II: [*ROW*, *WE*, *CE*, *CESEE* excluding *CE*].

The VAR-I system is estimated to study the spillovers between Western Europe and CESEE (Figure 4.15, left panels). The VAR-II model serves to examine the growth linkages between Western Europe and Central Europe (CE) on the one hand, and Western Europe and rest of CESEE, on the other hand (Figure 4.15, right panels).

The identification of the estimated shocks is achieved using Cholesky decompositions (that is, standard recursive ordering), and results presented in the text used the ordering of the countries indicated above. Robustness analysis for the result employing the methodology proposed by Bayoumi and Swiston (2008) was also carried out. More specifically, alternative orderings among countries were considered, and "averaged" impulse responses were calculated. The results are not affected by alternative orderings.

The model is estimated with five lags to ensure absence of autocorrelation in the estimated residuals. The results with four lags, which are more standard in the literature using quarterly data in the estimation of VAR models, yield quantitatively similar results.

(d) Credit Spillovers

The role of western bank lending to CESEE in the credit boom-bust cycles (Panel VAR-I) and the relationship between real credit growth and real economic activity growth (real GDP growth, real domestic demand growth, and real import growth) in CESEE (Panel VAR-II) are studied using a Panel VAR approach.

The baseline scenario considers 15 CESEE countries (Belarus, Bulgaria, Croatia, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Russia, the Slovak Republic, Slovenia, Turkey, and Ukraine) and estimates the Panel VAR model using the least square dummy variable (LSDV) method between the 2003:Q1–2010:Q4 periods.[58]

PANEL VAR-I:

This model aims at characterizing the relationship between western bank lending and private credit expansion in CESEE. The first stage Panel VAR model, estimated with country-specific dummies using two lags, is as follows (for i = country index and t = 2003:Q1–2010:Q4):

$$CY_{i,t} = \alpha_i + \beta_1 CY_{i,t-1} + \beta_2 CY_{i,t-2} + \gamma FY_{i,t} + \varepsilon_{i,t},$$

where $CY_{i,t}$ is the quarterly change in private credit relative to GDP, and $FY_{i,t}$ is the quarterly change of BIS-reporting banks' exposure to CESEE banks relative to GDP.

PANEL VAR-II:

The second step of the analysis studies the relationship between real credit growth and real economic activity.

The second stage Panel VAR model, estimated with country-specific dummies using two lags, is as follows (for i = country index and t = 2003:Q1–2010:Q4):

$$Z_{i,t} = \delta_i + \pi_1 Z_{i,t-1} + \pi_2 Z_{i,t-2} + \rho C_{i,t} + \nu_{i,t},$$

where $Z_{i,t}$ is quarterly growth of real economic activity, and $C_{i,t}$ is quarterly growth of real private credit.

[58] Other CESEE countries are not considered because of data unavailability.

Appendix. Europe: IMF-Supported Arrangements[59]
(As of September 7, 2011)

Country	IMF Loan Size, Approval Date, Duration[60]	Key Objectives and Policy Actions	Additional Information
Ukraine	$16.4 billion Stand-by Arrangement, November 2008, 24 months	• Help the economy adjust to the new economic environment by allowing the exchange rate to float, aim to achieve a balanced budget in 2009, phase in energy tariff increases, and pursue an income policy that protects the population while slowing price increases. • Restore confidence and financial stability (recapitalizing viable banks and dealing promptly with banks with difficulties). • Protect vulnerable groups in society (an increase in targeted social spending to shield vulnerable groups).	In July 2010, a new SDR 10 billion, 29 month Stand-by Arrangement (SBA) program was approved, replacing the November 2008 SBA.
	$15.2 billion Stand-by Arrangement, July 2010, 29 months	• Restore confidence and fiscal sustainability by reducing the general government deficit to 2.5 percent of GDP by 2012 and setting public debt firmly on a downward path below 35 percent by 2015. • Initiate reforms to modernize the gas sector and phase out Naftogaz's deficit, including through gas tariff increases and a price mechanism that depoliticizes price setting of public utilities. • Restore and safeguard banks' soundness through completion of recapitalization plans by end-2010 and strengthened supervision. • Develop a more robust monetary policy framework focused on domestic price stability with greater exchange rate flexibility under a more independent National Bank of Ukraine.	The first review of the new SBA arrangement was completed in December 2010. The second review has been on hold pending completion of prior actions. (www.imf.org/external/country/UKR/index.htm)
Latvia	$2.4 billion (€1.7 billion) Stand-by Arrangement, December 2008, 27 months, extended to 36 months	• Take immediate measures to stem the loss of bank deposits and international reserves. • Adopt fiscal measures to reduce the budget deficit to well below the 3 percent of GDP necessary for euro adoption. • Take steps to resolve state-owned banks, restore confidence in the banking system, and support private debt restructuring. • Implement income policies and structural reforms to help rebuild competitiveness under the fixed exchange rate regime.	In addition to financial assistance from the IMF, the program is heavily supported by the EU. A number of European countries also provided substantial financial assistance, which the authorities have treated as precautionary. On completion of the second review in February 2010, the arrangement was extended to December 22, 2011. The fourth review of the program was completed in May 2011. (www.imf.org/external/country/LVA/index.htm)
Romania	$17.1 billion (€12.9 billion) Stand-by Arrangement, May 2009, 24 months	• Cushion the effects of the sharp drop in private capital inflows while implementing policy measures to address the external and fiscal imbalances and to strengthen the financial sector. • Strengthen fiscal policy to reduce the government's financing needs and improve long-term fiscal sustainability. • Maintain adequate capitalization of banks and liquidity in domestic financial markets. • Bring inflation within the central bank's target.	Sizable financial support is also received from the EU. The seventh and final review was completed in March 2011. The authorities treated the associated tranche as precautionary.

Note: The main authors of this appendix are Lone Christiansen and Phakawa Jeasakul.

[59] On August 31, 2011, IMF staff level agreement was reached on an 18-month precautionary Stand-by Arrangement in the amount of SDR 935 million (€1 billion) with Serbia. With approval by the IMF Executive Board pending, the arrangement is not listed in this table.

[60] Conversions from SDR to USD and EUR are done at the exchange rate prevailing at the time of program approval.

Appendix *(continued)*

Country	IMF Loan Size, Approval Date, Duration[60]	Key Objectives and Policy Actions	Additional Information
	$4.9 billion (€3.5 billion) Stand-by Arrangement, March 2011, 24 months	• Designed as a precautionary arrangement. • Focus on promoting growth and employment and maintaining financial and macroeconomic stability.	With the program having successfully ensured macroeconomic and financial stability under very difficult circumstances, the expiring SBA was replaced by a new 24-month precautionary SBA in the amount of $4.9 billion. The EU is also providing funds on a precautionary basis under the new program. The first review was completed in June 2011. In the context of the second review, an IMF staff team said in August 2011 that the program remains on track. IMF Executive Board discussion is scheduled for September 2011. (www.imf.org/external/country/ROU/index.htm)
Poland	$20.6 billion Flexible Credit Line, May 2009, 12 months	The Flexible Credit Line (FCL) is an instrument established for IMF member countries with very strong fundamentals, policies, and track records of implementation. Access to the FCL is not conditional on further performance criteria.	The arrangement for Poland, which has been kept precautionary, has helped stabilize financial conditions there, boost confidence, and support continued access to market financing. (www.imf.org/external/country/POL/index.htm)
	$20.4 billion Flexible Credit Line, July 2010, 12 months	July 2010 FCL serves as a successor arrangement to May 2009 FCL.	
	$30 billion Flexible Credit Line, January 2011, 24 months	July 2010 FCL was cancelled and replaced by a new 2-year FCL arrangement approved in January 2011.	
Bosnia and Herzegovina	$1.6 billion Stand-by Arrangement, July 2009, 36 months	Safeguarding the currency board arrangement by a determined implementation of fiscal, income, and financial sector policies: • Reducing the structural fiscal balance mainly through public wage restraint and savings on nontargeted social transfers, thus bringing public finances on a sustainable medium-term path. • Reforming the system of benefits, public administration, and the budget process. • Supporting adequate liquidity and capitalization of banks.	The second and third reviews were completed in October 2010. Completion of further reviews has been hindered by the delay in government formation following the October 2010 general elections. Meanwhile, performance under the program remains uneven. While economic developments have been broadly in line with the program scenario, progress on structural reforms has been slow. (www.imf.org/external/country/BIH/index.htm)
Moldova	$0.6 billion Extended Credit Facility and Extended Fund Facility, January 2010, 36 months	• Reverse the structural fiscal deterioration that occurred in 2008–09 while safeguarding funds for public investment and priority social spending. • Keep inflation under control while rebuilding foreign reserves to cushion the economy from external shocks. • Ensure financial stability by enabling early detection of problems and strengthening the framework for bank rehabilitation and resolution. • Raise the economy's potential through structural reforms. • To promote poverty reduction, the program sets a floor on priority social spending. Moreover, social assistance spending has been increased substantially to support vulnerable households, while its targeting is being improved.	The third review was completed in July 2011. (www.imf.org/external/country/MDA/index.htm)

Country	IMF Loan Size, Approval Date Duration[60]	Key Objectives and Policy Actions	Additional Information
Kosovo	$140 million Stand-by Arrangement, July 2010, 18 months	Achieving fiscal stabilization, while accommodating large infrastructure investments, and safeguarding financial sector stability: • Limit the overall budget deficits in 2010 to 3.4 percent of GDP by raising select excise taxes and by restraining current primary spending. • Bolster the government's bank balances held with the Central Bank of Kosovo (CBK) to provide scope for emergency liquidity assistance (ELA), and provide the CBK with a mandate for ELA, and further strengthen the banking system. • Improve the financial position of the energy sector to limit its costs to the budget.	Kosovo became the 186th member of the IMF on June 29, 2009. The March 2011 mission found that the review under the SBA could not be concluded due to disagreement on the draft budget for 2011.
	Staff Monitored Program, June 2011, until end-2011	• Create a track record of sound fiscal management that could pave the way to a program endorsed by the IMF Executive Board in 2012. • Take important steps toward restoring fiscal sustainability by: • Implementing a fiscal adjustment of ¾ percent of GDP in 2011 by increasing excise taxes and restraining current spending, notably the wage bill. • Adopting a 2012 budget containing another ¾ percent of GDP of fiscal adjustment, partly from the wage bill. • Strengthen budget planning and execution, including by assessing the fiscal impact of envisaged benefits and pensions to ensure fiscal sustainability.	The Staff Monitored Program is an informal agreement with IMF staff to monitor the implementation of the authorities' economic program. It does not entail endorsement by the IMF Executive Board and does not involve financial assistance by the IMF. (www.imf.org/external/country/UVK/index.htm)
Greece	$39 billion (€30 billion) Stand-by Arrangement, May 2010, 36 months	• Restoring confidence and fiscal sustainability: substantial front-loaded fiscal effort reinforced by fiscal institutional reforms to bolster confidence, regain market access, and put the debt-to-GDP ratio on a declining path. • Restoring competitiveness and growth: nominal wage and benefit cuts and structural reforms to reduce costs and improve price competitiveness. An ambitious privatization agenda to boost investment and growth, which will also help reduce public debt. • Safeguarding financial sector stability: establishment of a Financial Stability Fund (FSF) to deal with possible solvency pressures; extension of government banking liquidity support facilities and ECB's nonstandard monetary policy measures.	IMF financial assistance of €30 billion is in parallel with bilateral financial support of €80 billion available from euro area partners. The total amount of €110 billion over three years will cover the expected public financing gap during the program's period. The fourth review was completed in July 2011. On July 21, 2011, the leaders of the 17 euro area countries agreed to provide an estimated €109 billion in fresh financing to Greece. Together with voluntary private sector contributions and continued IMF support, it would close a financing gap in Greece's budget, which had emerged as the original timetable for the return of the Greek sovereign to capital markets slipped. The second financing package is currently being finalized. (www.imf.org/external/country/GRC/index.htm)
Ireland	$30.1 billion (€22.5 billion) Extended Fund Facility, December 2010, 36 months	Put the economy on a path of sustainable growth, sound public finances, and job creation: • Restore the health of the banking sector by reorganizing and deleveraging the domestic banks, and strengthening their capital base. • Implement a sizable fiscal adjustment to bring the deficit below 3 percent of GDP by 2015. • Enhance competitiveness and support growth through structural reforms.	IMF financial assistance of €22.5 billion forms part of the substantial financial package amounting to €85 billion, of which the remaining funds comprise support from European partners and from Ireland's own contributions. The third review was completed in September 2011. On completion of the review, IMF staff commended the Irish authorities' continued resolute implementation of their program and strong fiscal consolidation performance. They welcomed recent improvements in financial market conditions for Ireland and noted that implementation of the financial sector strategy is advancing ahead of schedule in some areas. (www.imf.org/external/country/IRL/index.htm)

Appendix *(concluded)*

Country	IMF Loan Size, Approval Date Duration[2]	Key Objectives and Policy Actions	Additional Information
Macedonia	$640 million Precautionary Credit Line, January 2011, 24 months	The Precautionary Credit Line (PCL) is a new IMF instrument established in the context of enhancing its lending tools to help provide effective crisis prevention. This is the first IMF commitment under PCL. The access to the credit line in the first year is up to $533 million.	In March 2011, Macedonia purchased SDR 197 million (about $310 million) under the PCL. The first review under the PCL was completed in September 2011. (www.imf.org/external/country/MKD/index.htm)
Portugal	$37.8 billion (€26 billion) Extended Fund Facility, May 2011, 36 months	• Enhancing growth: structural reforms to increase competition, reduce labor costs, and boost employment and productivity. • Restoring confidence and fiscal sustainability: ambitious and credible fiscal consolidation plan, supported by structural fiscal reforms to streamline the functioning of the public sector and reduce fiscal risks. • Safeguarding financial stability: increase in the capital positions of banks supported, as needed, by a fully funded capital backstop facility; safeguards to support adequate banking system liquidity and for strengthening the supervisory and regulatory framework.	IMF financial assistance of €26 billion forms part of a financial package amounting to €78 billion over three years, of which the remaining funds comprise support from European partners. An IMF staff team visited Portugal in August 2011 for the first review and stated that the program is on track. The IMF Executive Board discussion is scheduled for September 2011. (www.imf.org/external/country/PRT/index.htm)

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