

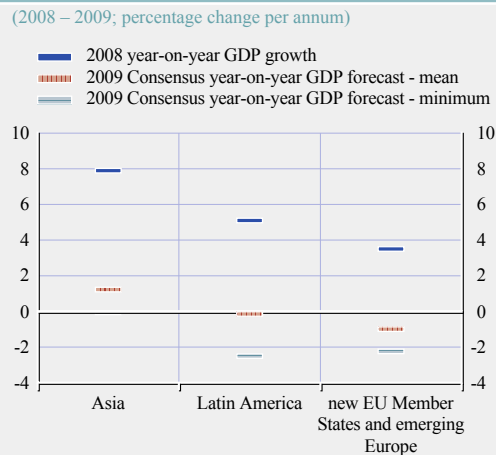
**Box 15**

**ASSESSING THE RESILIENCE OF EURO AREA BANKS TO AN ADVERSE MACROECONOMIC SCENARIO  
IN THE NEW EU MEMBER STATES AND EMERGING MARKETS**

Recent macro-financial developments in central and eastern Europe and emerging markets indicate that virtually all of them are being affected by the significant deterioration in global financial and economic conditions. Impacts on these countries have been heterogeneous, albeit severe in

some cases, reflecting significant differences in their domestic and external imbalances and therefore their vulnerability. The challenging macro-financial environment has meant that the banking sectors of new EU Member States and emerging market countries have come under increasing strain, predominantly as a result of a combination of two shocks.<sup>1</sup> First, external funding, on which many banking systems in these regions are reliant, became more scarce and expensive in 2008 and 2009; and second, the risk that non-performing loans will rise materially has increased on account of the economic slowdown and its repercussions for the debt servicing capacities of the corporate and household sectors. In some cases, this has already stretched balance sheets, not least owing to the balance-sheet effect of exchange rate depreciations. Against this background, this box analyses potential losses facing euro area banks should downside risks for the macroeconomic outlook of some new EU Member States and emerging market economies materialise.

Chart A Consensus Economics GDP growth forecasts for 2009



Source: Consensus Economics.

Potential losses facing euro area banks from lending activities in the new EU Member States and emerging market countries were estimated in three steps: first, by using the lower bound of Consensus Economics forecasts for GDP growth for these countries, as a proxy for the worst-case scenario; second, by empirically relating non-performing loans to GDP growth in the individual countries concerned, thereby allowing a projection of the potential increase in non-performing loans in 2009 to be computed on the basis of the worst-case macroeconomic scenario; and third, by combining these non-performing loan projections with information on what is known about the exposures of euro area large and complex banking groups (LCBGs) to these regions. Regarding the first step, contributors to Consensus Forecasts envisaged significant deterioration in major world regions in the first few months of 2009, with some expecting sizeable economic contractions (see Chart A).

Non-performing loans were empirically linked to GDP in a bivariate vector auto-regression (VAR) framework, whereby the elasticity of non-performing loans to a one percentage point decrease in annual GDP growth was estimated to range between 0.5 and 0.6 for all geographic regions.<sup>2</sup> For the new EU Member States, the estimates were based on consolidated banking data on non-performing loans, while for Asian and Latin American exposures, non-performing loans were approximated with Credit-Edge+ expected default frequencies for the whole corporate sector. These simple projections indicate that non-performing loans could increase by between 7.5 and 10 percentage points, on average, for the whole region under study. These aggregate figures,

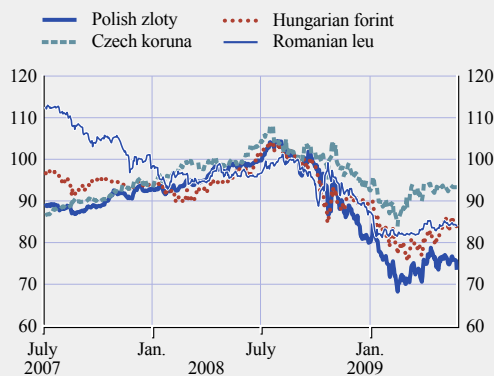
1 The strains in the banking sectors of new EU Member States and emerging market countries have not emerged uniformly across the region. Moreover, the delayed onset of these strains in some countries after the eruption of the turmoil in mature economy financial systems gave banks time to prepare by accumulating additional capital buffers and loan-loss provisions to protect themselves from shocks.

2 This framework does not take into account the asymmetries which may exist between new EU Member States and emerging market countries.



**Chart B Change in four central and eastern European countries' currencies against the euro**

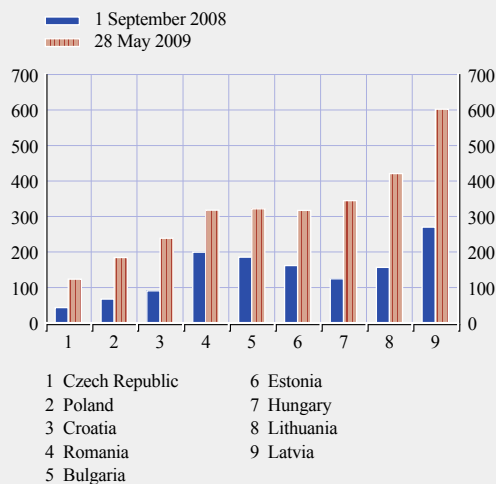
(July 2007 – May 2009; index: Sep. 2008 = 100)



Source: Bloomberg.

**Chart C Sovereign CDSs in central and eastern European countries**

(basis points)



Source: Bloomberg.

Note: The Estonian sovereign CDS is a purely synthetic instrument without any underlying asset.

however, mask important differences across countries, notably in the new EU Member States. Finally, loan losses were computed from the information given by LCBGs in their annual reports on exposures to the new EU Member States, Asia and Latin America.

The findings from this simple exercise, which has a number of caveats, shows that if the worst-case macroeconomic scenario were to materialise in 2009 in the new EU Member States, Asia and South America, the losses that euro area LCBGs would have to absorb collectively would amount to slightly more than 7% of their Tier 1 capital.<sup>3</sup> Although this finding suggests that the balance sheets of LCBGs, would not be unduly strained by such a scenario, there are important differences across LCBGs, and some of them could see their Tier 1 capital shrink by as much as a third under such a scenario. Moreover, for those institutions facing losses on other business lines, the combined effect could pose important challenges. That said, three mitigating risk factors have to be taken into account: first, most euro area LCBGs would be hardly affected by a more severe than currently expected economic downturn in all of these regions; second, as shown by the BIS banking statistics for the fourth quarter 2008, foreign banks remained committed to central and eastern European countries; and, third, public sector funding from the EU and the IMF had been seen by the markets as making an important contribution to lowering the risks in these regions.

Potential losses for euro area banks from lending to emerging market countries and the new EU Member States could be aggravated further if financial market conditions in those countries were to continue to deteriorate. In particular, after the collapse of Lehman Brothers, a sharp rise in global risk aversion triggered significant outflows from some emerging economies, including new EU

<sup>3</sup> This figure takes full account of loan-loss reserves, but it is based on an assumption that there were no retained profits in 2008 to cover any losses that might be incurred on loans extended in 2009. The expected loss amounts were based on an assumption that the recovery rate would be 30%. This recovery rate is somewhat higher than the assumptions in private sector reports. For the latter, see Morgan Stanley, "Emerging Euro – Banks: Making the 97/98 Asian Crisis Our Base Case", March 2009 and JPMorgan Chase & Co., "European Banks: Absorbing CEE stress, crunching numbers", March 2009.

Member States. One consequence of this was large depreciations in the currencies of several of the new EU Member States (see Chart B) and a fall in market liquidity. However, in countries with currency board arrangements, which also had large foreign currency exposures, the foreign exchange market pressures were reflected in changes in foreign exchange reserves and domestic interest rates, rather than in the exchange rates. That said, since the beginning of 2009, there has been more differentiation in foreign exchange rate patterns, although global risk aversion remains a dominant factor. Generally, the countries perceived as being most vulnerable to the challenges of the macro-financial environment – i.e. those with banking systems that are strongly reliant on foreign funding and/or have a large share of foreign currency lending – have faced the greatest foreign exchange rate pressures, although there are some exceptions. In some countries, the high share of foreign currency-denominated loans exacerbated the risk to the real economy of sharp local currency movements, as borrowers face a relative increase in the amount of their debt.

This could, in turn, lead to an aggravation of the economic downturn in central and eastern Europe, as some western banks with local subsidiaries may endeavour to reduce their risk exposure to the region. Fears of such negative feedback loops between the financial and economic spheres in the new EU Members States and other emerging economies have contributed to a significant increase in perceived sovereign risk in the region (see Chart C).