

Box 12

THE COMPOSITION AND QUALITY OF BANK CAPITAL

Following the intensification of the financial crisis in late 2008, euro area banks have come under increased pressure to improve the size and quality of their capital buffers. This box examines the capital positions for a sub-sample of 15 euro area LCBGs that had reported in enough detail to provide figures for both 2007 and 2008.

The total amount of regulatory capital decreased slightly, by 4%, over the period 2007-08 for the sample of 15 euro area LCBGs (see the table below). However, more noteworthy are the important changes in the composition of capital. Tier 1 and core Tier 1 capital increased modestly, while supplementary capital fell by 28%. Especially upper Tier 2 and Tier 3 capital were reduced significantly. This may well reflect the fact that banks have made efforts to respond to the pressure from market participants to achieve a higher quality of capital, as well as to changing priorities (in the medium run) in terms of bank solvency metrics on the part of regulators.¹

The sample of 15 LCBGs also reduced the size of their risk-weighted asset portfolio, by 13%, over the period 2007-08, while total assets remained virtually unchanged. The former may be largely due to the introduction of Basel 2 in 2008. In any case, the combined impact of asset rebalancing and a reshuffling in capital led to substantial improvements in regulatory capital ratios, with Tier 1 reaching almost double the regulatory minimum for these banks. On the other

¹ See, for example, UK Financial Services Authority, "The Turner Review", March 2009, which advocates that regulatory capital ratios be expressed entirely in terms of high-quality capital – broadly speaking the current core Tier 1 and Tier 1 definitions.

The composition of euro area large and complex banking groups' capital

(EUR millions; in percentages)

	2007	2008	Percentage change
Volumes			
Core Tier 1 capital	280,664	288,921	3.0
Total hybrid capital	59,078	77,912	32.0
<i>As a percentage of Tier 1</i>	17	22	
of which innovative hybrid capital	7,865	1,652	-79.0
<i>As a percentage of Tier 1</i>	2	0.5	
Tier 1 capital	340,611	360,757	6.0
Lower Tier 2 capital	154,532	124,685	-19.0
Upper Tier 2 capital	23,356	1,587	-93.0
Tier 3 capital	3,774	1,451	-62.0
Supplementary capital	189,412	136,278	-28.0
Total regulatory capital	479,897	461,898	-4.0
Total risk-weighted assets	4,643,836	4,039,954	-13.0
Consolidated total assets	13,096,303	13,064,708	-0.2
Tangible assets	12,953,667	12,928,106	-0.2
Consolidated equity (including minorities)	499,484	410,903	-18.0
Ratios			
Core Tier 1 capital ratio	6.04	7.2	18.0
Tier 1 capital ratio	7.33	8.9	22.0
Total capital ratio	10.33	11.4	11.0
Equity/assets	3.81	3.1	-18.0
Core Tier 1 capital/tangible assets	2.17	2.2	3.0

Sources: CreditSights and ECB calculations.

Note: The sample refers to 15 euro area LCBGs with comparable data for 2007 and 2008.

hand, the leverage ratio fell from 3.81% to 3.10%, owing to the sharp decline in consolidated equity as a result of the effect of negative earnings.

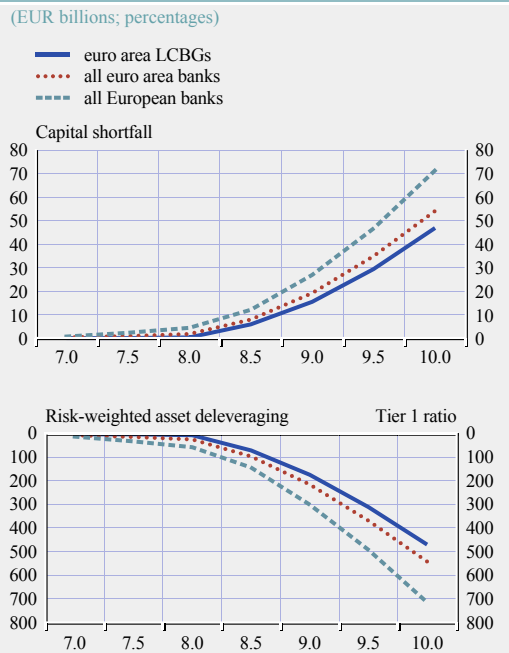
As equity capital has been depleted during the crisis, investors have been demanding a higher quality and quantity of bank capital. Though banks still have ample Tier 1 capital to meet regulatory requirements, they may need additional equity capital to satisfy the increasing capital requirements of investors. Market participants currently often refer to a threshold Tier 1 ratio of 10% and a leverage ratio of 4-5%.

Simulations show that in order to meet a Tier 1 ratio of 10%, €47 billion in additional capital would be required for a group of 16 euro area LCBGs, and €71 billion for a larger sample of 35 European banks including smaller euro area as well as UK and Swiss banks (see Chart A).² Instead of raising new equity, banks could alternatively reduce risk-weighted assets to achieve the desired capital ratio. In the case of a targeted Tier 1 ratio of 10%, simulations show that risk-weighted assets would have to shrink by €469 billion for the group of euro area LCBGs and by €715 billion for the group of European banks.

Moreover, investors and regulators are increasingly focusing on high-quality capital such as core Tier 1 capital – which has the highest loss-absorbing characteristics – and on leverage ratios, instead of on the conventional Tier 1 capital ratios. Further simulations show that, on the basis of leverage ratios such as core Tier 1 to tangible assets (CT1), the capital shortfall is substantially

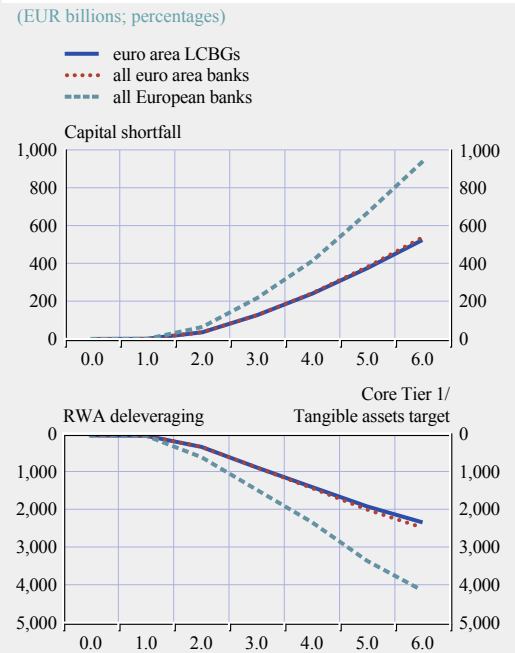
2 These computations are based on end-2008 figures, but also take into account the extra capital raised afterwards.

Chart A European banks' Tier 1 capital ratios and capital shortfall



Sources: Individual financial institutions' balance sheet data and ECB calculations.
Note: Calculations are based on data for 22 euro area banks (16 of which are LCBGs) and 13 other European banks.

Chart B European banks' core Tier 1 leverage ratios and capital shortfall



Sources: Individual financial institutions' balance sheet data and ECB calculations.
Note: Calculations are based on data for 22 euro area banks (16 of which are LCBGs) and 13 other European banks.

higher (Chart B). The euro area banks would have to raise €240 billion in core Tier 1 capital to achieve a CT1 ratio of 4%, or would have to deleverage by €6 trillion, equivalent to a reduction of €1.3 trillion in risk-weighted assets. For the European banks, the capital shortfall would increase to €414 billion or require €10.3 trillion of (tangible) asset shedding, equivalent to a risk-weighted asset reduction of €2.3 trillion.

However, it should be stressed that a CT1 threshold of 4% or 5%, which market participants take as a norm, is inferred from US bank averages and is likely as such to be an unrealistic target for euro area banks owing to differences in the definition of assets under different accounting standards. Indeed, euro area banks follow the International Financial Reporting Standards (IFRSs), while US banks report under US Generally Accepted Accounting Principles (GAAP). The IFRSs are extremely restrictive as regards netting of derivatives on the balance sheet, while under US GAAP (or Swiss GAAP, which is similar), netting is much more widely permitted. This has as the effect that assets reported under the IFRSs may in some extreme cases appear almost twice as high as what they would be if reported under US GAAP.

Against this background, European banks are strengthening their capital bases in part by repaying junior bonds which are currently trading at large discounts to face value, mainly owing to concerns about the financial strength and viability of many institutions. The discounts can be booked as profits, which boosts core equity capital. However, repaying liabilities at discounts in combination with asset-shedding can only be one element of the efforts to strengthen banks' financial soundness in the short term and cannot be a substitute for capital that is generated from retained earnings.