CEPS COMMENTARY
Thinking ahead for Europe

A closer look at Dexia:
The case of the misleading capital ratios

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19 October 2011

Banking supervisors and regulators attach too much importance to the current capital ratios, despite the multi-indicators approach encouraged by Basel III. The recent experience of Dexia shows that reliance on this single capital indicator can be very costly. A month before the announcement of the €94 billion rescue package on October 10th,[1] the Belgian-French bank stressed that it still had a solid capital reserve.[2] The bank quoted regulatory capital ratios at the end of June that were well above the legal standards. Why then did this seemingly sound bank fail? And why did the EBA stress tests, whose results were published only in July, fail to signal Dexia's problems?

When first published, the results of the stress tests performed by the European Banking Authority (EBA) gave little evidence of Dexia's vulnerability. The test was based on the current criteria for Basel II capital (core Tier-1 ratio). Dexia was ranked 12th of the 90 tested banks, with a stressed core Tier-1 ratio of more than twice the benchmark of 5%. In turn, the equity ratio was only about 1.9%, representing one-sixth of the core Tier-1 ratio at year-end 2010. In other words, for every €53 in assets, the bank had only €1 in capital (see Table 1). Such a level of leverage is high, twice in fact the average of large EU banks.[3] The leverage and difference with other large banks are largely explained by the calculation of the risk-weighted assets (RWA) and the definition of core Tier-1 capital, both of which painted an overly optimistic picture.

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[1] In short, the rescue package agreed by Belgium, France and Luxembourg foresees a split of Dexia in which the Belgium state will acquire Dexia Bank Belgium (excluding Dexia Asset Management) for €4 billion plus profit-sharing when the bank is sold within five years. In addition, Belgium (60.5%), France (36.5%) and Luxembourg (3%) will provide up to €90 billion in guarantees to Dexia. Furthermore, the bank will enter into negotiations for the sale of Dexia Banque Internationale à Luxembourg to the Luxembourg state and to guarantee the funding of local French municipalities with Caisse des Dépôts et Consignations (CDC) and La Banque Postale.

[2] For Dexia's response to a series of 'negative' news reports, see http://www.dexia.com/EN/news/in_short/Pages/Liquidity-funding-programme-Reaction-of-Dexia.aspx

[3] The comparative data in this commentary were drawn from R. Ayadi, E. Arbak, W.P. de Groen (2011), *Business Models in European Banking: A pre-and post-crisis screening,* CEPS Paperback, September (www.ceps.eu/book/business-models-european-banking-pre-and-post-crisis-screening).

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Table 1. Development of capital ratios (2006-10)

	2006	2007	2008	2009	2010
RWA as % of total assets	23.5%	26.4%	23.5%	24.8%	24.9%
Total equity as % of total assets	3.3%	2.7%	0.9%	2.1%	1.9%
Core Tier 1 ratio (min 4%)	8.7%	8.2%	9.6%	11.3%	12.1%
Capital adequacy ratio (min 8%)	10.3%	9.6%	11.8%	14.1%	14.7%
Leverage ratio (assets/equity)	30.7	36.9	115.9	48.2	52.8

Source: Author's own calculations based on data in Tables A1-A3 in the Annex.

Dexia's regulatory capital was much higher than its total equity due to over €10 billion of losses that were not recognised in the income statement.[4] This balance sheet item mainly consists of reclassifications. Assets held in a bank's trading book may prompt losses during downturns owing to the fact that they are valued according to the fair value of those securities. This can give banks an incentive to transfer assets to their banking books in order to avoid incurring further losses in the future. According to an amendment made by the International Accounting Standards Board (IASB) to IAS 39 on Financial Instruments: Recognition and Measurement in October 2008,[5] these transfers can be made when these 'unrealised' losses (i.e. the difference between the market value and the fair value) are deducted from the company's total equity—but not core Tier-1 capital. Dexia made extensive use of these transfers, which made the bank's core Tier-1 ratio appear nearly twice as high, which is very uncommon.[6]

Over the past five years, Dexia's RWA accounted for roughly one-quarter of its total assets (see Table A3 in the Annex).[7] This share is significantly lower than for most other large banks in Europe, whose average ratio of RWA-to-assets is nearly 40%. Under current capital regulations, banks do not have to hold any capital charges for most public debt, even if the assets are potentially at-risk, as in the case of exposures to Greece. In Dexia's case, exposures to public authorities represented over one-half of the bank's total activities, of which over 80% had a negligible risk weight of 10% or less.

The large sovereign holdings made the bank very vulnerable to the eurozone sovereign debt crisis. Dexia's credit risk exposure to Greece, Ireland, Italy, Portugal and Spain (GIIPS) was €100 billion, €22 billion of which was in government bonds.[8] The scenario in the EBA's stress test, however, factored in very limited losses on outstanding loans to the public sector. In the test, significant depreciation charges were taken only in the trading book for loans to the public sectors in Greece, Ireland and Portugal, whereas Dexia's trading book holds only a fraction of its total exposure to public sector lending in these countries. Depreciations on loans in the bank book were limited, but they form the bulk of Dexia's exposure. At worst, the charges were even still below the 21% write-down by the Institute for International Finance (IIF) on Greek sovereign debt, announced a week after the EBA disclosed the stress test results. In retrospect, the EBA was too conservative in its assumptions for the stress

[4] See also Table A1 in the Annex for the construction and development of Dexia's equity.

[5] See http://www.iasb.org/NR/rdonlyres/BE8B72FB-B7B8-49D9-95A3-CE2BDCFB915F/0/AmdmentsIAS39andIFRS7.pdf.

[6] This decrease is substantially larger than the average of between 5% to 10% deduction of core tier for most other major EU banks. See also Table A2 in the Annex for the calculation and development of Dexia's core tier 1 capital.

[7] Among the various possible explanations for these differences, Dexia's exposure to public debt is the most likely. These loans, which account for about 55% of Dexia's total credit risk exposure, traditionally have no or only very limited risk weight in the RWA.

[8] See Table A4 in the Annex for a distribution of the government bond holdings by country.

scenario, as had also been its predecessor, the Committee of European Banking Supervisors (CEBS) the year before.[9]

The limited absorptive capacity and substantial exposures to the GIIPS made the bank also prone to liquidity shortages. In fact, only one-tenth of Dexia's (medium) long-term wholesale funding issued last year was uncovered.[10] However, short-term funding was more important for the bank. The long-term loans to the public sector were to a large extent financed by short-term funds. As a result of the outbreak of the crisis and the uncertainty in the capital markets, this tiny margin business was no longer viable. Dexia became highly dependent on central bank funds and government guaranteed debt. This reliance on short-term liquidity was reduced in recent years, but was still substantial by year-end 2010.[11] Attracting short-term funding became more and more difficult during the current eurozone sovereign debt crisis, due to increasing haircuts on assets pledged as collateral and the closing of the short-term government guarantee facility. The EBA's stress test did not consider liquidity in its analyses.[12] If the stress test had used the new indicators as suggested by Basel III (leverage-, liquidity-ratio, as well as stronger capital-criteria), it is more likely that Dexia would have been identified as a weak institution, given its high leverage and its dependence on short-term funding.

To conclude, the case of Dexia clearly shows that a high core Tier-1 ratio does not automatically imply that the bank is safer. Today's RWA calculation is not perfect, with low-risk weights for loans to public services. Similarly, (core) Tier-1 capital depends to a large extent on its definition. These sensitivities should be sufficient to treat the core Tier-1 ratio carefully. If the EBA stress test had anticipated the introduction of the new Basel III criteria, it would be more likely that it would have exposed Dexia's vulnerabilities, enabling a better resolution of the bank at a minimal social cost.

[9] The first EBA stress test has clearly provided more guidance on the exposures of the tested banks, than did the CEBS stress test in 2010. In the methodology note, however, EBA mentions that there are problems with the harmonisation of the data. Dexia's sovereign data, for instance, do not include its loans to local public sector, in contrast to many other banks included in the test. The local public sector loans of Dexia have been classified as 'institutions' instead.

[10] The remaining 90% consisted almost entirely of government-guaranteed debt (52%) and covered bonds (31%).

[11] It is impossible for outsiders to make comparisons with other banks due to limited transparency. However, the scant information available showed that Dexia was, for example, one of the biggest users of the emergency loans from the FED after the collapse of Lehman Brothers in September 2008.

[12] See Karel Lannoo (2011), "The second EU bank stress test: Further work in progress", CEPS Commentary, CEPS, 22 July (www.ceps.eu/book/second-eu-bank-stress-test-further-work-progress).

Annex

Table A1. Equity construction (2006-10)

€ millions	2006	2007	2008	2009	2010
Core shareholders' equity	14,433	16,112	17,488	18,498	19,214
Gains and losses not recognised in the statement of income	1,866	(1,587)	(13,572)	(8,317)	(10,269)
Non controlling interest and Discretionary participations	2,136	1,869	1,702	1,807	1,783
Total Equity	18,435	16,394	5,618	11,987	10,728
Equity as % of total assets	3.3%	2.7%	0.9%	2.1%	1.9%

Source: Dexia Annual Reports, 2006-2010.

Table A2. (Core) Tier-1 ratios (2006-10)

€ millions	2006	2007	2008	2009	2010
Core shareholders' equity	14,433	16,112	17,488	18,498	19,214
Minority interests	501	517	557	613	660
Intangibles, prudential filters, cumulative translation adjustments and other deductions	(3,329)	(3,503)	(3,340)	(2,959)	(2,872)
Core Tier-1 capital	11,605	13,126	14,705	16,152	17,002
Core Tier-1 ratio (min 4%)	8.7%	8.2%	9.6%	11.3%	12.1%
Hybrid capital	1,423	1,423	1,421	1,421	1,423
Tier-1 Capital	13,028	14,549	16,126	17,573	18,425
Tier-1 ratio	9.8%	9.1%	10.6%	12.3%	13.1%
Additional own funds	726	796	1,951	2678	2211
Capital adequacy capital	13,754	15,345	18,077	20,251	20,636
Capital adequacy capital ratio (min 8%)	10.3%	9.6%	11.8%	14.1%	14.7%

Source: Dexia Annual Reports, 2006-2010.

Table A3. Size of development assets and risk-weighted assets (2006-10)

€ millions	2006	2007	2008	2009	2010
Total assets	566,743	604,564	651,006	577,630	566,735
Risk-weighted assets (RWA)	133,369	159,383	152,837	143,170	140,834
RWA as % of total assets	24%	26%	23%	25%	25%

Source: Dexia Annual Reports, 2006-2010.

Table A4. Government bond portfolio GIIPS (end-2010)

€ millions	**Banking book**	**Trading book**	**Insurance book**	**Total**
Greece	3,437	1	828	4,266
Ireland	-	-	326	326
Italy	12,354	5	1,143	13,502
Portugal	1,927	-	235	2,162
Spain	1,373	15	314	1,702
Total	19,091	21	2,846	21,958

Source: Dexia Annual Reports, 2006-2010.

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