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Industry Update

Spanish financials

Interpreting the stress test results: banks and cajas

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CEBS / Bank of Spain publish the stress test results

On July 23, the CEBS published the results of the stress tests run on 27 Spanish credit institutions (90% of the market). This report analyzes in detail the assumptions used in and conclusions drawn from the Spanish banks and saving banks' tests.

Mixed feelings on the assumptions; disappointed by the results

We regard the impairment assumptions (both on sovereign and the different credit buckets) as sufficiently severe and consistent. We are, however, less convinced by and have lower visibility on what is included in and how the regulator arrived at some of its forecasts on PPP, capital gains and other "impairment buffers". This is particularly relevant as under a marginally tougher set of assumptions in this area, a larger number of institutions would have failed the test (nine instead of five, with another six below 6.5% Tier 1), although admittedly the incremental amount of capital is limited to E3.5bn. The system's total capital shortfall under the "adverse + sovereign shock" scenario stands at E2bn. Note that this figure is incremental to the E14.3bn already injected, making a combined total cE16.3bn. This falls below our estimate of E35bn, the IMF's E22bn and similar figures from other market participants. Out of the 27 institutions analyzed, five (all of which are saving banks) fail to maintain a Tier I ratio above 6% under the "adverse" scenario. Listed names have all passed the tests, with Santander and BBVA the most resilient and Pastor, with a 6% Tier 1, the weakest. Discussions on whether a 6% Tier 1 threshold was sufficiently challenging will continue. Under a more severe 8% threshold, 21 institutions would fail, with a hypothetical system capital shortfall of E13.2bn.

Has Spain missed an opportunity to restore confidence?

Out of the 22 banks that exceeded the 6% Tier 1 threshold, there were six below 6.5% and another three between 6.5% and 7%. Our concerns are therefore not so much related to the size of the capital shortfall (under some tougher hypothetical scenarios the amount would increase by only E3.5bn), but the potentially missed opportunity by Spain to use the stress test as a catalyst to promote a second wave of recapitalizations (especially considering that the potential incremental amount would have been easily manageable for the FROB). Whilst acknowledging that the assumptions in the adverse scenario may never materialize, we fear that the stress test results have left the door open to further speculation about whether the resolution of the issues surrounding some smaller institutions' solvency levels are being delayed. This might interrupt the restoration of market confidence (in light of market performance over the last few weeks) and, more importantly, make it difficult for these institutions to access term debt markets, one of the main issues the stress test was originally meant to address.

Cautious on domestic, but positive on SAN and BBVA – valuation and risks

Spain's macro outlook is no doubt challenging and Spanish financial institutions are facing what might be their toughest year in a decade. With the disappointing stress test results, still-poor sentiment and visibility may prove the main short-term headwinds. A very cautious general approach is necessary, especially with respect to Spanish domestic banks (all rated Hold). Stress test results reinforce our preference for Santander (Buy) and BBVA (Buy). The main risks relate to developments and newsflow regarding the Spanish economy. We derive our target prices from single-stage P/Tangible Equity and SOTP models (pp. 29-32).

Deutsche Bank AG/London

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Executive summary

On July 23, the CEBS and Bank of Spain published the results of the stress tests run on 27 Spanish credit institutions (90% of the market). In this piece, we analyze in detail the assumptions used in and conclusions drawn from the Spanish banks and saving banks' tests and offer our views on the FROB's next steps.

Mixed feelings on the assumptions; disappointed by the results

- We regard the impairment assumptions (both on sovereign and the different credit buckets) as sufficiently severe and consistent. We are, however, less convinced by and have lower visibility on what is included in and how the regulator arrived at some of its forecasts on PPP, capital gains and other "impairment buffers". This is particularly relevant as under a marginally tougher set of assumptions in this area (see p. 21), a larger number of institutions would have failed the test (nine instead of five, with another six below 6.5% Tier 1), although admittedly the incremental amount of capital is limited to E3.5bn (easily manageable considering the E88bn still at the FROB's disposal). Moreover, the stress tests on smaller institutions were run without differentiating the underlying quality of a specific credit bucket amongst institutions, an approach that benefits weaker players the most.
- Based on the assumptions outlined in the announcement (pp. 5-17 contain all the details), under the "adverse scenario", Bank of Spain estimates a gross impairment from credit and sovereign of E207bn (7.3% of the system's assets and 9.5% of the cajas'), which in net terms (after PPP and loan loss provisions) is E28bn (1% of the system's assets). This would bring the system's Tier 1 down from 9.5% at the end of 2009 to 8.3% in 2011.
- The system's total capital shortfall under the "adverse + sovereign shock" scenario stands at E2bn. Note that this figure is incremental to the E14.3bn already injected (E10.5bn by the FROB, E3.7bn by the DGF for CCM), resulting in a combined cE16.3bn. This figure falls below Deutsche Bank's estimate of E35bn, the IMF's E22bn and similar figures from other market participants. The E2bn therefore does not match our and market forecasts, something we believe is linked to the assumptions on PPP, capital gains and other items, rather than the severity of the loss rates. A section on the stress test results can be found on pages 18-23.
- Out of the 27 institutions analyzed, five failed to maintain a Tier I ratio above 6% under the most severe assumptions. Unsurprisingly, all of these five institutions are saving banks (full list in Figure 17). Listed names have all passed the tests, with Santander and BBVA the most resilient and Pastor, with a 6% Tier 1, the weakest under the "adverse scenario".
- Considering the (in some cases) large level of hybrids included under Tier 1 (150bps of total Tier 1 according to Bank of Spain), we do not find a 6% stated Tier 1 ratio target particularly challenging. We do, therefore, see a risk that banks will be pressured to recapitalize to 8% rather than 6%, and that "near misses" may also end up being expected to raise capital. Of the 27 institutions analyzed in the stress test, 21 are below an 8% Tier 1 ratio, including some listed names like Pastor (6% Tier 1), Bankinter (6.8% Tier 1), Sabadell (7.2% Tier 1) and Popular (7% Tier 1). The aggregate capital shortfall under an 8% Tier 1 threshold would then be E13.2bn, compared with the E2bn shortfall under the 6% threshold.

Has Spain missed an opportunity to restore confidence?

- Out of the 22 banks that do exceed the 6% Tier 1 threshold, there are six below 6.5% and another three between 6.5% and 7%. Our concerns are therefore not so much related to the size of the capital shortfall (under some tougher hypothetical scenarios the amount

would increase by only E3.5bn), but the potentially missed opportunity by Spain to use the stress tests as a catalyst to promote a second wave of recapitalizations (especially considering that the potential incremental amount would have been easily manageable for the FROB). Whilst acknowledging that the assumptions in the adverse scenario may never materialize, we fear that the stress test results have left the door open to further speculation about whether the resolution of the issues surrounding some of the smaller institutions' solvency levels are being delayed. This might interrupt the restoration of market confidence (in light of market performance over the last few weeks) and, more importantly, make it difficult for these institutions to access term debt markets, one of the main issues the stress test was originally meant to address.

- During the presentation held on Saturday in Madrid, when challenged about the need for recapitalizations for institutions with Tier 1 ratios slightly above 6% after the stress test, Bank of Spain defended its stance, arguing that the 6% threshold is already 50% more than the legal requirement and that the results were run under a very stressed and unlikely scenario. We regard forced recapitalization as unlikely in the medium term.

Cautious on domestic, but positive on SAN and BBVA

Spain's macro outlook is no doubt challenging and Spanish financial institutions are facing what might be the toughest year in a decade. With the disappointing stress test results, still-poor sentiment and visibility may prove the main short-term headwinds. We therefore believe a very cautious general approach is necessary, especially with respect to Spanish domestic banks. We still prefer Santander and BBVA based on their undemanding valuation, comfortable capital and funding position, proven P&L resilience (even under more severe conditions as shown by the stress test results) and attractive earnings diversification.

Spanish financials: stress test results

After weeks of speculation, the Committee for European Banking Supervisors (CEBS) and the local regulators (Bank of Spain in our case) have published the results of the stress tests run on 91 European financial institutions (27 of which were Spanish – eight banks and 19 saving banks). Whilst the results at a European level are discussed in a separate report published by Matt Spick today, given their relevance, we wanted to have a closer look at the assumptions for and results of the Spanish banks and saving banks' tests.

In the following sections we review in more detail the individual results, the assumptions used by the regulator, the role/size of the FROB, the capital needs, and the recent regulatory changes affecting the saving banks sector. The full press release is available at www.bde.es and <http://stress-test.c-ebs.org/results.htm>.

IMPORTANT NOTE: Popular has spotted a mistake in the stress test results published on Friday. The error refers to its real estate developers book and whilst the 2-year cumulative loss rate is correct, the impairment (in Euro millions) is wrong. Based on Popular's real estate developers book and stock of repossessed assets, the amount should be closer to E2bn (we estimate) instead of the E6.9bn published under the "adverse scenario". The company will probably issue an official statement recalculating the stress test results in due course. Until that happens, all the analysis in this report is based on the publicly disclosed figures.

NOTE 1: Given the large number of institutions involved in the stress test and that 77% of them are unquoted (all the 17 saving banks and two small commercial banks), we will present and analyze the results split between listed names (showing data for the individual names) and saving banks.

NOTE 2: In addition to the CEBS's template for bank-specific publication of the stress test output, Bank of Spain has released the results in a different format, which although containing the same end results in terms of Tier 1 ratio under the adverse scenario, etc, combines some of the assumptions, thus enabling a proper comparison between the CEBS and Bank of Spain. In this report we will follow Bank of Spain's format as it provides better clarity and granularity on the loss rates by type of book and also splits some of the "buffers" included in the analysis (loan loss provisions on the balance sheet, etc).

Spanish institutions included in the stress tests – sufficiently representative

On 7 July, the CEBS provided the full list of European institutions included in the stress test. Looking at the Spanish sample, we would regard the results as sufficiently representative given that the entities analyzed represent 85-90% of the asset base of the Spanish banks and saving banks. Note that the stress tests have been run for the resulting saving banks after the restructuring process in the past few months.

In Figure 1 we summarize the final list and how much they represent as a percentage of the total system's assets.

Figure 1: Spanish financial institutions included in the stress test

	Asset base (latest published in Ebn)	As a % of Spanish financial system asset base (*)
Santander (SAN.MC)	609.1	20.0%
BBVA (BBVA.MC)	419.1	13.7%
JUPITER (Caja Madrid/Bancaja/Caixa Laietana/Caja Insular de Canarias/Caja Avila/Caja Segovia/Caja Rioja)	337.3	11.1%
CAIXA (La Caixa/Caixa Girona)	260.6	8.5%
BASE (Caja Ahorros del Mediterraneo/Cajastur+Caja Castilla la Mancha/Caja Cantabria/Caja Extremadura)	127.3	4.2%
Banco Popular (POP.MC)	123.0	4.0%
Banco Sabadell (SABE.MC)	83.0	2.7%
DIADA (Caixa Cataluña/Caixa Tarragona/Caixa Manresa)	79.3	2.6%
BREOGAN (Caixanova+Banco Gallego/Caixa Galicia)	77.5	2.5%
MARE NOSTRUM (Caja Murcia/Caixa Penedes/Sa nostra/Caja Granada)	72.1	2.4%
Bankinter (BKT.MC)	56.0	1.8%
ESPIGA (Caja España/Caja Duero)	46.4	1.5%
BANCA CIVICA (Caja Navarra/Caja General de Canarias/Caja Burgos)	45.7	1.5%
Ibercaja	44.6	1.5%
UNICAJA (Unicaja/Caja Jaen)	35.2	1.2%
Banco Pastor (PAS.MC)	31.8	1.0%
Cajasol/Guadalajara	31.5	1.0%
BBK	29.8	1.0%
UNNIM (Caixa Sabadell/Caixa Terrasa/Caixa Manlleu)	28.5	0.9%
Kutxa	21.1	0.7%
Caja Inmaculada/Caja circulo Burgos/Caja Badajoz	20.8	0.7%
CajaSur	19.6	0.6%
Banca March	9.1	0.3%
Banco Guipuzcoano	10.2	0.3%
Vital Kutxa	9.2	0.3%
Caixa Ontinyent	1.0	0.0%
Caixa Pollanca	0.3	0.0%
TOTAL banks and saving banks' assets (according to Bank of Spain)	3,051	
o/w included in stress test	2,629	86.2%
o/w excluded from stress test	422	13.8%

Source: Deutsche Bank estimates, Bank of Spain, CEBS (*) Assets based domestically

The assumptions: Punitive enough on impairments, but not sufficiently ambitious on buffers

Leaving aside discussions around whether the 6% Tier 1 ratio threshold is or is not enough and/or whether core capital would have been more appropriate, we regard the impairment assumptions (both on sovereign and the different credit buckets) as sufficiently severe and consistent. We are, however, less convinced by and have lower visibility on what is included and how the regulator has arrived at some of its forecasts on PPP, capital gains and other "impairment buffers". The latter is particularly relevant as under a marginally tougher set of assumptions in this area, a larger number of institutions would have failed the test (nine instead of five, with another six below 6.5% Tier 1), although admittedly the incremental amount of capital is limited to E3.5bn (easily manageable considering the E88bn still at the FROB's disposal). Moreover, the stress tests on smaller institutions were run without differentiating the underlying quality of a specific credit bucket amongst institutions, an approach that benefits weaker players the most.

Based on the assumptions outlined in the announcement (pp. 5-17 contain all the details), under the “adverse scenario”, Bank of Spain estimates a gross impairment from credit and sovereign of E207bn (7.3% of the system’s assets and 9.5% of the cajas’), which in net terms (after PPP and loan loss provisions) is E28bn (1% of the system’s assets). This would bring the system’s Tier 1 down from 9.5% at the end of 2009 to 8.3% in 2011.

Based on the assumptions outlined in the announcement, the system’s total capital shortfall under the “adverse + sovereign shock” scenario stands at E2bn. Note that this figure is incremental to the E14.3bn already injected (E10.5bn by the FROB, E3.7bn by the DGF for CCM), resulting in a combined cE16.3bn. This figure falls below Deutsche Bank’s estimate of E35bn, the IMF’s E22bn and similar figures from other market participants. The E2bn therefore falls well below our and market forecasts, something we believe is linked to the assumptions around PPP, capital gains and other items, rather than the severity of the loss rates.

Out of the 27 institutions analyzed, five failed to maintain a Tier I ratio above 6% under the most severe assumptions, and unsurprisingly all five institutions are saving banks (full list in Figure 17). Listed names have all passed the tests, with Santander and BBVA the most resilient and Pastor, with a 6% Tier 1 under the “adverse scenario”, the weakest.

The format of the results presentation

Bank of Spain presented the results of the stress test under two different scenarios, the “benchmark scenario” and the “adverse scenario”, the latter assuming a more severe deterioration in the economic and therefore also the banking environment. Amongst other assumptions (analyzed in detail below), the adverse scenario considers a cumulative 2.6 pp decrease in Spanish GDP over the period 2010–2011, on top of the 3.6 pp decline posted in 2009.

Unlike the CEBS, Bank of Spain presents the results in three blocks, namely:

- (1) **Impairment calculations:** Under both scenarios, it provides the expected impairment under different credit book buckets (including lending book and fixed income portfolios different to trading) plus the impairment from a sovereign shock (including trading and equity portfolios available for sale).
- (2) **Resources available to absorb impairments:** Bank of Spain presents on one side the on-balance sheet loan loss provisions (under CEBS these are deducted straight from impairments) and the expected accumulated pre-provision profit (PPP) in 2010-2011 (under both scenarios).
- (3) **Impact on Tier 1:** Again under both scenarios, Bank of Spain presents the reconciliation between impairments and “absorbing buffers” to arrive at the stressed Tier 1 capital.

Although in the following section we analyze the results in full, in Figure 2 we have included a sample for the Spanish sector for clarity. We will review the assumptions used, following Bank of Spain’s approach.

Figure 2: Total system (banks and saving banks) stress test results summary

	Benchmark	Benchmark	Adverse	Adverse
IMPAIRMENTS	Em	% assets	Em	% assets
Credit book (*)	-146,608	-5.2%	-173,619	-6.1%
o/w financial institutions	-1,988	-0.6%	-2,273	-0.7%
o/w corporates	-18,242	-3.2%	-22,904	-4.0%
o/w real estate developers and repossessed assets	-63,679	-14.5%	-76,012	-17.3%
o/w SME	-18,269	-6.0%	-22,968	-7.6%
o/w residential mortgages	-16,884	-1.6%	-15,345	-1.7%
o/w other retail	-30,546	-10.6%	-34,116	-11.8%
Sovereign shock and others (**)	-10,429	-0.4%	-33,854	-1.2%
Gross impairment (accumulated 2010-2011)	-157,037	-5.6%	-207,473	-7.3%
AVAILABLE RESOURCES TO ABSORB IMPAIRMENTS				
Balance sheet loan loss reserves (end of 2009)	69,918	2.5%	69,918	2.5%
Pre-provision profit + capital gains (accumulated 2010-2011)	107,284	3.8%	99,483	3.5%
Taxes	-4,487	-0.2%	9,998	0.4%
Net impairment (accumulated 2010-2011)	15,678	0.6%	-28,075	-1.0%
IMPACT ON TIER 1 CAPITAL				
	Em	% RWA	Em	% RWA
Tier 1 at December 2009	181,865	9.5%	181,865	9.5%
+/- net impairment (accumulated 2010-2011)	15,678	0.8%	-28,075	-1.5%
+/- dividends, unused generic reserves and other items	-13,801	-0.7%	-5,451	-0.3%
Tier 1 at December 2011	183,742	9.6%	148,339	7.7%
FROB support to date	10,991	0.6%	10,991	0.6%
Tier 1 at December 2011 after FROB	194,733	10.2%	159,330	8.3%
Addition capital required to reach 6% Tier 1 in 2011	0	0.0%	2,042	0.1%

Source: Deutsche Bank estimates and Bank of Spain

Credit book impairment calculations/assumptions

In Figure 3 we summarize the main loss rates assumed both for the system as a whole and for the saving banks sector in particular. Both under the “benchmark scenario” and the “severe scenario”, we regard the assumptions used as sufficiently severe, realistic and consistent across credit buckets and players, the reasons being:

Figure 3: Loss rates: Bank of Spain's forecasts broken down by type of credit

	Total system (banks+cajas)		Saving banks (only)		Santander		BBVA	
	Benchmark	Adverse	Benchmark	Adverse	Benchmark	Adverse	Benchmark	Adverse
	% assets	% assets	% assets	% assets	% assets	% assets	% assets	% assets
Credit book (*)	-5.2%	-6.1%	-6.3%	-7.7%	-4.0%	-4.5%	-4.5%	-4.9%
o/w financial institutions	-0.6%	-0.7%	-0.9%	-1.1%	-0.7%	-0.9%	-0.3%	-0.3%
o/w corporates	-3.2%	-4.0%	-4.4%	-5.9%	-2.6%	-3.1%	-2.6%	-3.1%
o/w real estate developers and repossessed assets	-14.5%	-17.3%	-14.9%	-18.1%	-13.6%	-15.2%	-10.5%	-11.4%
o/w SME	-6.0%	-7.6%	-6.7%	-8.8%	-5.9%	-6.7%	-3.1%	-3.7%
o/w residential mortgages	-1.6%	-1.7%	-1.6%	-1.8%	-1.2%	-1.3%	-3.1%	-3.4%
o/w other retail	-10.6%	-11.8%	-6.0%	-7.3%	-12.7%	-14.1%	-10.9%	-11.7%

Source: Deutsche Bank estimates and Bank of Spain

Figure 4: Loss rates: Bank of Spain's forecasts broken down by type of credit (cont)

	Popular		Sabadell		Bankinter		Pastor	
	Benchmark	Adverse	Benchmark	Adverse	Benchmark	Adverse	Benchmark	Adverse
	% assets	% assets	% assets	% assets	% assets	% assets	% assets	% assets
Credit book (*)	-7.3%	-8.8%	-5.9%	-7.4%	-3.1%	-3.8%	-7.6%	-9.0%
o/w financial institutions	-0.5%	-0.7%	-0.8%	-0.9%	-0.8%	-1.0%	-1.0%	-1.2%
o/w corporates	-4.0%	-5.5%	-4.1%	-5.6%	-4.4%	-5.8%	-4.7%	-6.2%
o/w real estate developers and repossessed assets	-15.0%	-17.7%	-14.9%	-17.6%	-16.8%	-19.3%	-16.9%	-19.3%
o/w SME	-6.7%	-8.8%	-6.6%	-8.7%	-6.9%	-9.0%	-6.9%	-9.0%
o/w residential mortgages	-1.3%	-1.4%	-0.9%	-1.0%	-0.8%	-0.9%	-1.5%	-1.7%
o/w other retail	-5.6%	-6.8%	-8.3%	-9.5%	-5.8%	-7.1%	-5.8%	-7.1%

Source: Deutsche Bank estimates and Bank of Spain; (*) Includes lending book and fixed income portfolio different to trading and pref shares; (**) "Others" includes trading book and equity portfolios available for sale

- Focusing on Bank of Spain's release (i.e. loss rates before considering loan loss provision), no details (for neither the sector nor banks individually) have been provided as to what the implied PD (Probability of Default) and LGD (Loss given Default) are in the stress test. Bank of Spain has explained, however, that for those banks not running IRB models for capital calculation (i.e. all the institutions analyzed except some of the listed banks), the starting PD from which the stressed scenarios were then calculated (with the deterioration trend set by the ECB guidelines) was obtained from the Spanish Credit Registry. For the LDG, however, Bank of Spain has used historical evidence and has leveraged on the models used by some of the listed banks.
- The undesired effect from the "averaging": Linked to the previous bullet point, the fact that PD and LGD are the same for a number of institutions (i.e. the stress test does not factor in the different underlying quality of a specific credit bucket amongst institutions), raises some concerns about "undesired" effects such as the tests "benefiting" weaker players.
- Under the "adverse scenario" the LGD factors in nominal declines of 25% in finished properties, 50% in unfinished properties and 61% in land prices; all in all, a 28% decline in nominal prices from the peak.
- Within the "real estate developers" bucket, Bank of Spain has included assets that have been repossessed/acquired by the banks over the past few quarters.
- The real estate developers book is expected to have a loss rate under the "adverse scenario" of 17.3% (18.3% for the saving banks). Assuming a PD of 30% (i.e. 2.5-3x today's levels), Bank of Spain is implying a LGD of 55%, a high level compared to historical standards.
- Impairments related to real estate developers represent 40% of all credit impairments for the system, but 63% for the saving banks. Moreover, 72% of the system's impairment from real estate developers is from the Cajas, consistent with their weaker (in terms of credit quality) and larger exposure to the sector.
- Under the "adverse scenario", the system's total loss rate for the credit book (which also includes the fixed income portfolio different to trading), is 6.1% (7.7% for the saving banks). Assuming a LGD of 40% (above the historical 25-30%), the implied PD is 15.2% (19.2% for the saving banks). Alternatively, if we assume a 50% LGD (implicitly assuming much lower real estate prices and more difficulties in repossessing), the implied PD would be 12.2% (2x above today's level) and 15.4% for the saving banks.
- Comparisons between loss rates provided under the CEBS's and Bank of Spain's templates are not possible as the CEBS's are net of loan loss provisions, whereas Bank of Spain's are gross. In any case, if we compare 2009's loss rates in the corporate and retail book versus the 2-year accumulated loss rates, we conclude that in the corporate book the loss rate (in the "severe scenario") is 2.4x higher than 2009's (note: we eliminate from the

average the atypically high numbers of five players) and in the retail book c2x higher. See Figure 5.

Figure 5: Comparison between loss rate assumptions under CEBS disclosure

	2009 1-year loss rate on corporate exposures	2009 1-year loss rate on retail exposures	2011 2-year loss rate on corporate exposures under adverse scenario	Difference versus 2009's x2	2011 2-year loss rate on retail exposures under adverse scenario	Difference versus 2009's x2
Santander	0.9%	1.4%	2.4%	1.3x	3.6%	1.3x
BBVA	0.7%	2.1%	1.7%	1.2x	3.8%	0.9x
JUPITER (*)	1.3%	0.4%	8.6%	3.3x	1.3%	1.6x
LA CAIXA (*)	1.6%	0.2%	8.3%	2.6x	1.4%	3.5x
BASE (*)	2.7%	0.3%	8.9%	1.6x	1.7%	2.8x
Popular	1.9%	0.4%	9.0%	2.4x	1.8%	2.3x
Sabadell	0.3%	0.2%	6.4%	10.7x	1.0%	2.5x
DIADA (*)	0.3%	0.0%	9.5%	15.8x	1.6%	n.m
BREOGAN (*)	1.6%	0.2%	8.4%	2.6x	1.6%	4.0x
MARE NOSTRUM (*)	1.1%	0.2%	9.4%	4.3x	1.3%	3.3x
Bankinter	1.1%	0.2%	4.6%	2.1x	1.0%	2.5x
ESPIGA (*)	2.7%	0.4%	7.1%	1.3x	1.3%	1.6x
BANCA CIVICA (*)	1.2%	0.3%	7.9%	3.3x	1.3%	2.2x
Ibercaja	1.1%	0.1%	8.1%	3.7x	0.9%	4.5x
UNICAJA (*)	2.3%	0.4%	5.0%	1.1x	0.6%	0.8x
Pastor	3.0%	0.7%	8.1%	1.4x	1.6%	1.1x
Cajasol/Guadalajara	1.7%	0.3%	8.3%	2.4x	2.0%	3.3x
BBK	1.3%	0.3%	5.2%	2.0x	0.7%	1.2x
UNNIM (*)	0.6%	0.0%	10.8%	9.0x	1.4%	n.m
Kutxa	1.9%	0.3%	7.6%	2.0x	-0.1%	-0.2x
CAI/Caja Circulo/Caja Badajoz	1.2%	0.3%	8.3%	3.5x	1.5%	2.5x
CajaSur	5.4%	0.5%	6.9%	0.6x	1.1%	1.1x
Banca March	1.7%	0.6%	5.5%	1.6x	1.0%	0.8x
Banco Guipuzcoano	1.4%	0.6%	7.0%	2.5x	1.2%	1.0x
Vital Kutxa	0.1%	0.0%	9.4%	47.0x	1.8%	n.m
Caixa Ontinyent	1.1%	0.2%	7.5%	3.4x	1.1%	2.8x
Caixa Pollanca	0.9%	0.3%	8.7%	4.8x	1.3%	2.2x
Average	1.5%	0.4%	7.4%	2.4x	1.4%	1.8x

Source: Deutsche Bank; (*) JUPITER (Caja Madrid/Bancaja/Caixa Laietana/Caja Insular de Canarias/Caja Avila/Caja Segovia/Caja Rioja); LA CAIXA (La Caixa/Caixa Girona); BASE (Caja Ahorros del Mediterraneo/Cajastur+Caja Castilla la Mancha/Caja Cantabria/Caja Extremadura); CAM (Caja Ahorros del Mediterraneo/Cajastur+Caja Castilla la Mancha/Caja Cantabria/Caja Extremadura); DIADA (Caixa Cataluña/Caixa Tarragona/Caixa Manresa); ESPIGA (Caja España/Caja Duero); BREOGAN (Caixanova+Banco Gallego/Caixa Galicia); MARE NOSTRUM (Caja Murcia/Caixa Penedes/Sa nostra/Caja Granada); BANCA CIVICA (Caja Navarra/Caja General de Canarias/Caja Burgos); UNICAJA (Unicaja/Caja Jaen); ; UNNIM (Caixa Sabadell/Caixa Terrasa/Caixa Manlleu)

- Not only have domestic books been subject to the stress test, but also those in other geographies.

Impact of sovereign risk and others

In addition to credit impairments, Bank of Spain has run a stress test on sovereign exposures (only trading books) and available-for-sale equity securities. The basic assumptions behind this calculation include: (1) a direct shock on the trading book: a classic market-risk type of shock; (2) an additional haircut for the public debt on the trading book (i.e. long-term interest rate increase of 70% since 2009) equivalent to a decrease of 12% in Spanish 5-year bonds; and (3) an indirect effect due to an increase in interest: additional increases in PD and LGD.

The impact of the sovereign shock is responsible for 16% of total potential impairments in 2010-2011 for the total system (19% for saving banks), the rest coming from credit. As a percentage of total assets it represents 1.2% of assets under the "adverse scenario" for the system as a whole and 1.8% of total assets for saving banks (see Figure 17).

Figure 6: Breakdown of gross impairments between credit and sovereign

	System (banks and saving banks)	Saving banks (only)	Santander	BBVA	Popular	Sabadell	Bankinter	Pastor
% of gross impairment (2010+2011) that is credit-related	83.7%	81.1%	87.9%	80.5%	92.7%	87.5%	78.5%	91.6%
% of gross impairment (2010+2011) that is sovereign-related	16.3%	18.9%	12.1%	19.5%	7.3%	12.5%	21.5%	8.4%

Source: Deutsche Bank estimates and Bank of Spain

Loan loss provisions on balance sheet

In addition to the pre-provision forecasts under the “benchmark scenario” and the “adverse scenario”, the second most relevant buffer to absorb impairments is the loan loss provisions set aside in the past few years. As seen in Figure 7, the Spanish system has E69.9bn of loan losses on the balance sheet (50% of which are specific provisions and the other 50% generic). Of this amount, saving banks represent 44.6% (E31.2bn). We agree with the assumption of full utilization of the loan loss provisions, as under this theoretical stress test, all NPLs would be either lost or recovered, bringing down the default rate to zero.

Figure 7: Loan loss provision on the balance sheet

	Total system		Saving banks (only)		Santander		BBVA	
	Em	% assets	Em	% assets	Em	% assets	Em	% assets
Balance sheet loan loss reserves (end of 2009)	69,918	2.5%	31,214	2.8%	20,779	2.1%	10,147	2.3%

Source: Deutsche Bank estimates and Bank of Spain

Figure 8: Loan loss provision on the balance sheet (cont)

	Popular		Sabadell		Bankinter		Pastor	
	Em	% assets	Em	% assets	Em	% assets	Em	% assets
Balance sheet loan loss reserves (end of 2009)	3,187	2.6%	2,126	2.7%	879	1.7%	1,028	3.4%

Source: Deutsche Bank estimates and Bank of Spain

Loan loss provisions absorb around 34% of the gross impairments (29.2% in the cajas).

Figure 9: Loan loss provision % absorption of impairments

	Total system	Saving banks (only)	Santander	BBVA	Popular	Sabadell	Bankinter	Pastor
% of gross impairment (2010+2011) that is absorbed by loan loss provisions on balance sheet	33.7%	29.2%	41.3%	40.5%	28.0%	32.3%	35.5%	35.1%

Source: Deutsche Bank estimates and Bank of Spain

Pre-provision profit (PPP) calculations

Given the stress test results and the reasons why we believe the final capital shortfall has not been larger, we regard the assumptions around PPP as the most controversial, especially considering its relevance as a loss-absorbing line. In the following bullet points we look in detail at some of the numbers published, the underlying assumptions and our views.

- The first step is reconciling or at least trying to understand what explains the difference between the 2-year cumulative PPPs provided by the CEBS and Bank of Spain under the “adverse scenario”. Whereas at the system level (all banks and saving banks) the difference is around only 1.8% or E1.7bn (Bank of Spain’s is above CEBS’s), on an individual basis, there are some very significant differences, mainly for the saving banks.

Bank of Spain publishes the Spanish institutions’ PPP **including** the capital gains that the different institutions believe they may generate over the next couple of years (a figure that, although incorporated by the CEBS, is not disclosed). Whereas for us it is difficult to assess the likelihood of these disposals and the accuracy of the valuation, there is no doubt that without them, some institutions may not have passed the stress test.

In the following section (where we analyze the results) we present the impact on capital from not incorporating these gains, but in Figure 10 we summarize the main differences.

Figure 10: Comparison between CEBS/Bank of Spain 2-year cumulative PPP under "adverse scenario"

	BANK OF SPAIN	CEBS		
	2-year cumulative pre-provision profit under adverse scenario	2-year cumulative pre-provision profit under adverse scenario	GAP (in Em)	GAP (in %)
Santander	43,599	45,737	-2,138	-4.7%
BBVA	20,470	21,768	-1,298	-6.0%
JUPITER (*)	4,112	5,543	-1,431	-25.8%
LA CAIXA (*)	9,547	6,825	2,722	39.9%
BASE (*)	1,264	1,253	11	0.9%
Popular	5,548	4,498	1,050	23.3%
Sabadell	2,685	2,085	600	28.8%
DIADA (*)	951	730	221	30.3%
BREOGAN (*)	937	1,032	-95	-9.2%
MARE NOSTRUM (*)	911	1,385	-474	-34.2%
Bankinter	1,313	1,018	295	29.0%
ESPIGA (*)	350	431	-81	-18.8%
BANCA CIVICA (*)	562	645	-83	-12.9%
Ibercaja	898	770	128	16.6%
UNICAJA (*)	632	553	79	14.3%
Pastor	814	614	200	32.6%
Cajasol/Guadalajara	615	530	85	16.0%
BBK	1,859	575	1,284	223.3%
UNNIM (*)	320	290	30	10.3%
Kutxa	344	256	88	34.4%
CAI/Caja Circulo/Caja Badajoz	581	414	167	40.3%
CajaSur	93	256	-163	-63.7%
Banca March	646	206	440	213.6%
Banco Guipuzcoano	211	156	55	35.3%
Vital Kutxa	197	120	77	64.2%
Caixa Ontinyent	20	20	0	0.0%
Caixa Pollanca	6	6	0	0.0%
Total	99,485	97,716	1,769	1.8%

Source: Deutsche Bank estimates and Bank of Spain; ; (*) JUPITER (Caja Madrid/Bancaja/Caixa Laietana/Caja Insular de Canarias/Caja Avila/Caja Segovia/Caja Rioja); LA CAIXA (La Caixa/Caixa Girona); BASE (Caja Ahorros del Mediterraneo/Cajastur+Caja Castilla la Mancha/Caja Cantabria/Caja Extremadura); CAM (Caja Ahorros del Mediterraneo/Cajastur+Caja Castilla la Mancha/Caja Cantabria/Caja Extremadura); DIADA (Caixa Catalunya/Caixa Tarragona/Caixa Manresa); ESPIGA (Caja España/Caja Duero); BREOGAN (Caixanova+Banco Gallego/Caixa Galicia); MARE NOSTRUM (Caja Murcia/Caixa Penedes/Sa nostra/Caja Granada); BANCA CIVICA (Caja Navarra/Caja General de Canarias/Caja Burgos); UNICAJA (Unicaja/Caja Jaen); ; UNNIM (Caixa Sabadell/Caixa Terrasa/Caixa Manlleu)

- Secondly, we must assess the severity of the PPP assumptions under the "adverse scenario". Bank of Spain claims that the average PPP for the period 2010-2011 (under the "adverse scenario") has been stressed by 30% in relation to the figure recorded in 2009 (40% in the case of the saving banks). We are not sure how Bank of Spain arrives at those declines, but according to the data provided, we estimate an average of 16-18% (see Figure 11). Our impression is that this may be perceived as insufficient.

Figure 11: Comparison between CEBS/Bank of Spain 2-year cumulative PPP under "adverse scenario" versus 2009

	Pre-provision profit in 2009	2-year cumulative pre-provision profit under adverse scenario - BANK OF SPAIN DEFINITION (incl cap gains)	Difference between 2-year cumulative PPP in adverse and 2009's x2 (BoS definition)	2-year cumulative pre-provision profit under adverse scenario - CEBS definition	Difference between 2-year cumulative PPP in adverse and 2009's x2 (CEBS definition)
Santander	22,960	43,599	-5%	45,737	0%
BBVA	12,308	20,470	-17%	21,768	-12%
JUPITER (*)	4,120	4,112	-50%	5,543	-33%
LA CAIXA (*)	3,911	9,547	22%	6,825	-13%
BASE (*)	2,343	1,264	-73%	1,253	-73%
Popular	2,762	5,548	0%	4,498	-19%
Sabadell	1,326	2,685	1%	2,085	-21%
DIADA (*)	882	951	-46%	730	-59%
BREOGAN (*)	1,187	937	-61%	1,032	-57%
MARE NOSTRUM (*)	934	911	-51%	1,385	-26%
Bankinter	599	1,313	10%	1,018	-15%
ESPIGA (*)	828	350	-79%	431	-74%
BANCA CIVICA (*)	605	562	-54%	645	-47%
Ibercaja	449	898	0%	770	-14%
UNICAJA (*)	695	632	-55%	553	-60%
Pastor	713	814	-43%	614	-57%
Cajasol/Guadalajara	439	615	-30%	530	-40%
BBK	543	1,859	71%	575	-47%
UNNIM (*)	305	320	-48%	290	-52%
Kutxa	456	344	-62%	256	-72%
CAI/Caja Circulo/Caja Badajoz	244	581	19%	414	-15%
CajaSur	106	93	-56%	256	21%
Banca March	512	646	-37%	206	-80%
Banco Guipuzcoano	112	211	-6%	156	-30%
Vital Kutxa	119	197	-17%	120	-50%
Caixa Ontinyent	13	20	-23%	20	-23%
Caixa Pollanca	5	6	-40%	6	-40%
Total	59,476	99,485	-16%	97,716	-18%

Source: Deutsche Bank estimates and Bank of Spain; ; (*) JUPITER (Caja Madrid/Bancaja/Caixa Laietana/Caja Insular de Canarias/Caja Avila/Caja Segovia/Caja Rioja); LA CAIXA (La Caixa/Caixa Girona); BASE (Caja Ahorros del Mediterraneo/Cajastur+Caja Castilla la Mancha/Caja Cantabria/Caja Extremadura); CAM (Caja Ahorros del Mediterraneo/Cajastur+Caja Castilla la Mancha/Caja Cantabria/Caja Extremadura); DIADA (Caixa Cataluña/Caixa Tarragona/Caixa Manresa); ESPIGA (Caja España/Caja Duero); BREOGAN (Caixanova+Banco Gallego/Caixa Galicia); MARE NOSTRUM (Caja Murcia/Caixa Penades/Sa nostra/Caja Granada); BANCA CIVICA (Caja Navarra/Caja General de Canarias/Caja Burgos); UNICAJA (Unicaja/Caja Jaen); ; UNNIM (Caixa Sabadell/Caixa Terrasa/Caixa Manlleu)

- Note that saving banks' PPP include the restructuring costs associated with the restructuring processes that some of them are going through. In contrast, the PPP does not include the potential cost savings arising from those same restructuring processes.
- The fact that the difference between the "benchmark scenario" and "adverse scenario" is not very significant (just 9% on average for the system), raises question marks about the severity of the assumptions used (lending deceleration, increase in cost of funding, spread compression, etc). See Figure 12 for details.

Figure 12: Comparison between CEBS 2-year cumulative PPP under “adverse” and “benchmark” scenarios

	2-year cumulative pre-provision profit under benchmark scenario	2-year cumulative pre-provision profit under adverse scenario - CEBS definition	Difference between 2-year cumulative PPP in adverse and benchmark scenarios
Santander	49,196	45,737	-7%
BBVA	21,083	21,768	3%
JUPITER (*)	4,404	5,543	26%
LA CAIXA (*)	9,906	6,825	-31%
BASE (*)	1,330	1,253	-6%
Popular	5,785	4,498	-22%
Sabadell	2,795	2,085	-25%
DIADA (*)	989	730	-26%
BREOGAN (*)	991	1,032	4%
MARE NOSTRUM (*)	984	1,385	41%
Bankinter	1,367	1,018	-26%
ESPIGA (*)	373	431	16%
BANCA CIVICA (*)	596	645	8%
Ibercaja	939	770	-18%
UNICAJA (*)	661	553	-16%
Pastor	846	614	-27%
Cajasol/Guadalajara	643	530	-18%
BBK	1,889	575	-70%
UNNIM (*)	335	290	-13%
Kutxa	357	256	-28%
CAI/Caja Circulo/Caja Badajoz	603	414	-31%
CajaSur	106	256	142%
Banca March	657	206	-69%
Banco Guipuzcoano	219	156	-29%
Vital Kutxa	203	120	-41%
Caixa Ontinyent	21	20	-5%
Caixa Pollanca	7	6	-14%
Total	107,285	97,716	-9%

Source: Deutsche Bank estimates and Bank of Spain; ; (*) JUPITER (Caja Madrid/Bancaja/Caixa Laietana/Caja Insular de Canarias/Caja Avila/Caja Segovia/Caja Rioja); LA CAIXA (La Caixa/Caixa Girona); BASE (Caja Ahorros del Mediterraneo/Cajastur+Caja Castilla la Mancha/Caja Cantabria/Caja Extremadura); CAM (Caja Ahorros del Mediterraneo/Cajastur+Caja Castilla la Mancha/Caja Cantabria/Caja Extremadura); DIADA (Caixa Cataluña/Caixa Tarragona/Caixa Manresa); ESPIGA (Caja España/Caja Duero); BREOGAN (Caixanova+Banco Gallego/Caixa Galicia); MARE NOSTRUM (Caja Murcia/Caixa Penedes/Sa nostra/Caja Granada); BANCA CIVICA (Caja Navarra/Caja General de Canarias/Caja Burgos); UNICAJA (Unicaja/Caja Jaen); ; UNNIM (Caixa Sabadell/Caixa Terrasa/Caixa Manlleu)

- Finally, a quick look at how Deutsche Bank's PPP forecasts for 2010-2011 (listed names only) compare with Bank of Spain's and CEBS's PPP.

Figure 13: PPP comparison between CEBS/Bank of Spain forecasts and DB estimates

Table 10: Comparison between CEBS and Bank of Spain estimates					
	BANK OF SPAIN			CEBS	
	DB pre-provision profit forecast 2010-2011	2-year cumulative pre- provision profit under adverse scenario	GAP (%)	2-year cumulative pre- provision profit under adverse scenario	GAP (%)
Santander	50,434	43,599	-13.6%	45,737	-9.3%
BBVA	24,205	20,470	-15.4%	21,768	-10.1%
Popular	4,883	5,548	13.6%	4,498	-7.9%
Sabadell	2,379	2,685	12.9%	2,085	-12.4%
Bankinter	1,016	1,313	29.2%	1,018	0.2%
Pastor	953	814	-14.6%	614	-35.6%

Source: Deutsche Bank estimates and Bank of Spain

Tier 1 calculation

We have now gone through the impairments (credit and sovereign) and the “buffers” (pre-provision profits and loan loss provisions). In Figure 14 we summarize for the system and the

saving banks the Tier 1 reconciliation (full details on listed banks in Figure 15 and Figure 16). Below, we highlight an additional line that creates some noise around the results and on which we have little visibility.

Figure 14: Tier 1 reconciliation for the system and the saving banks

	System (banks and saving banks)				Saving banks (only)			
	Benchmark		Adverse		Benchmark		Adverse	
	Em	% RWA	Em	% RWA	Em	% RWA	Em	% RWA
Tier 1 at December 2009	181,865	9.5%	181,865	9.5%	78,097	9.2%	78,097	9.2%
+/- net impairment (accumulated 2010-2011)	15,678	0.8%	-28,075	-1.5%	-15,983	-2.0%	-38,636	-4.7%
+/- dividends, unused generic reserves and other items	-13,801	-0.7%	-5,451	-0.3%	4,830	0.6%	5,563	0.7%
Tier 1 at December 2011	183,742	9.6%	148,339	7.7%	66,944	8.2%	45,024	5.5%
FROB support to date	10,991	0.6%	10,991	0.6%	10,991	1.3%	10,991	1.3%
Tier 1 at December 2011 after FROB	194,733	10.2%	159,330	8.3%	77,935	9.5%	56,015	6.9%
Addition capital required to reach 6% Tier 1 in 2011	0	0.0%	2,042	0.1%	0	0.0%	2,042	0.2%

Source: Deutsche Bank estimates and Bank of Spain

- Starting from the Tier 1, Bank of Spain deducts the credit and sovereign impairments net of provisions, pre-provision profit and capital gains. In addition, Bank of Spain includes a line containing "dividends, unused generic reserves and other items". The main elements in this line are: (1) estimated dividends payable in the period 2010-2011; (2) variations in reserves originating from the valuation of assets at fair value in mergers or integration processes in the saving banks; and (3) other impacts such as the issuance, net of redemptions, of instruments eligible as Tier 1 (carried out or committed from 1 January 2010), the impact of estimated exchange rate movements from the same date on total assets, and deductions from capital due to the acquisition of holdings in financial institutions, among other things.

As was the case with capital gains in the PPP, it is difficult for us to assess the impacts included in this line but there is no doubt that without them, some institutions may have not passed the stress test. As seen in Figure 14 above, whereas for the system as a whole this line is negative (driven by the dividends of Santander and BBVA), for the saving banks it is a positive E5bn. In the following section we analyze the impact that the elimination of (or failure to include) this line would have on Tier I.

In the following two pages we present the stress test results for the system, the saving banks and the listed names.

Figure 15: Summary of stress test results

	Total system (banks+saving banks)				Saving banks (only)				Santander				BBVA			
	Benchmark		Adverse		Benchmark		Adverse		Benchmark		Adverse		Benchmark		Adverse	
	Em	% assets	Em	% assets	Em	% assets	Em	% assets	Em	% assets	Em	% assets	Em	% assets	Em	% assets
IMPAIRMENTS																
Credit book (*)	-146,608	-5.2%	-173,619	-6.1%	-70,731	-6.3%	-86,759	-7.7%	-39,294	-4.0%	-44,180	-4.5%	-18,233	-4.5%	-20,196	-4.9%
o/w financial institutions	-1,988	-0.6%	-2,273	-0.7%	-847	-0.9%	-1,010	-1.1%	-788	-0.7%	-848	-0.9%	-66	-0.3%	-69	-0.3%
o/w corporates	-18,242	-3.2%	-22,904	-4.0%	-6,762	-4.4%	-8,975	-5.9%	-5,594	-2.6%	-6,679	-3.1%	-4,007	-2.6%	-4,712	-3.1%
o/w real estate developers and repossessed assets	-63,679	-14.5%	-76,012	-17.3%	-45,136	-14.9%	-54,800	-18.1%	-5,197	-13.6%	-5,819	-15.2%	-3,177	-10.5%	-3,451	-11.4%
o/w SME	-18,269	-6.0%	-22,968	-7.6%	-7,930	-6.7%	-10,346	-8.8%	-4,698	-5.9%	-5,404	-6.7%	-1,197	-3.1%	-1,406	-3.7%
o/w residential mortgages	-16,884	-1.6%	-15,345	-1.7%	-6,401	-1.6%	-7,203	-1.8%	-3,632	-1.2%	-3,911	-1.3%	-3,157	-3.1%	-3,440	-3.4%
o/w other retail	-30,546	-10.6%	-34,116	-11.8%	-3,655	-6.0%	-4,425	-7.3%	-19,385	-12.7%	-21,519	-14.1%	-6,629	-10.9%	-7,118	-11.7%
Sovereign shock and others (**)	-10,429	-0.4%	-33,854	-1.2%	-7,129	-0.6%	-20,166	-1.8%	-1,562	-0.2%	-6,108	-0.6%	-1,245	-0.3%	-4,884	-1.1%
Gross impairment (accumulated 2010-2011)	-157,037	-5.6%	-207,473	-7.3%	-77,860	-6.9%	-106,925	-9.5%	-40,856	-4.1%	-50,288	-5.1%	-19,478	-4.5%	-25,080	-5.7%
AVAILABLE RESOURCES TO ABSORB IMPAIRMENTS																
Balance sheet loan loss reserves (end of 2009)	69,918	2.5%	69,918	2.5%	31,214	2.8%	31,214	2.8%	20,779	2.1%	20,779	2.1%	10,147	2.3%	10,147	2.3%
Pre-provision profit + capital gains (accumulated 2010-2011)	107,284	3.8%	99,483	3.5%	25,336	2.2%	24,197	2.1%	49,196	5.0%	43,599	4.4%	21,083	4.8%	20,470	4.7%
Taxes	-4,487	-0.2%	9,998	0.4%	5,328	0.5%	12,879	1.1%	-6,701	-0.7%	-3,114	-0.3%	-3	-0.7%	-1,313	-0.3%
Net impairment (accumulated 2010-2011)	15,678	0.6%	-28,075	-1.0%	-15,983	-1.4%	-38,636	-3.4%	22,419	2.3%	10,976	1.1%	8,789	2.0%	4,224	1.0%
IMPACT ON TIER 1 CAPITAL																
Tier 1 at December 2009	181,865	9.5%	181,865	9.5%	78,097	9.2%	78,097	9.2%	56,005	10.0%	56,005	10.0%	27,255	9.4%	27,255	9.4%
+/- net impairment (accumulated 2010-2011)	15,678	0.8%	-28,075	-1.5%	-15,983	-2.0%	-38,636	-4.7%	22,419	3.9%	10,976	1.9%	8,789	2.9%	4,224	1.4%
+/- dividends, unused generic reserves and other items	-13,801	-0.7%	-5,451	-0.3%	4,830	0.6%	5,563	0.7%	-14,555	-2.5%	-8,730	-1.5%	-4,016	-1.3%	-2,561	-0.8%
Tier 1 at December 2011	183,742	9.6%	148,339	7.7%	66,944	8.2%	45,024	5.5%	63,869	11.0%	58,251	10.0%	32,028	10.6%	28,918	9.3%
FROB support to date	10,991	0.6%	10,991	0.6%	10,991	1.3%	10,991	1.3%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Tier 1 at December 2011 after FROB	194,733	10.2%	159,330	8.3%	77,935	9.5%	56,015	6.9%	63,869	11.0%	58,251	10.0%	32,028	10.6%	28,918	9.3%
Addition capital required to reach 6% Tier 1 in 2011	0	0.0%	2,042	0.1%	0	0.0%	2,042	0.2%	0	0.0%	0	0.0%	0	0.0%	0	0.0%

Source: Deutsche Bank

Figure 16: Summary of stress test results (cont)

	Popular				Sabadell				Bankinter				Pastor			
	Benchmark		Adverse		Benchmark		Adverse		Benchmark		Adverse		Benchmark		Adverse	
IMPAIRMENTS	Em	%	Em	%	Em	%	Em	%	Em	%	Em	%	Em	%	Em	%
	assets		assets		assets		assets		assets		assets		assets		assets	
Credit book (*)	-8,697	-7.3%	-10,560	-8.8%	-4,609	-5.9%	-5,752	-7.4%	-1,561	-3.1%	-1,943	-3.8%	-2,261	-7.6%	-2,682	-9.0%
o/w financial institutions	-90	-0.5%	-112	-0.7%	-67	-0.8%	-80	-0.9%	-58	-0.8%	-69	-1.0%	-55	-1.0%	-66	-1.2%
o/w corporates	-459	-4.0%	-627	-5.5%	-660	-4.1%	-894	-5.6%	-332	-4.4%	-442	-5.8%	-223	-4.7%	-290	-6.2%
o/w real estate developers and repossessed assets	-5,893	-15.0%	-6,950	-17.7%	-2,001	-14.9%	-2,364	-17.6%	-272	-16.8%	-312	-19.3%	-1,507	-16.9%	-1,728	-19.3%
o/w SME	-1,657	-6.7%	-2,165	-8.8%	-156	-6.6%	-2,041	-8.7%	-491	-6.9%	-634	-9.0%	-341	-6.9%	-442	-9.0%
o/w residential mortgages	-274	-1.3%	-308	-1.4%	-115	-0.9%	-135	-1.0%	-182	-0.8%	-210	-0.9%	-75	-1.5%	-84	-1.7%
o/w other retail	-324	-5.6%	-398	-6.8%	-210	-8.3%	-238	-9.5%	-227	-5.8%	-276	-7.1%	-61	-5.8%	-74	-7.1%
Sovereign shock and others (**)	-100	-0.1%	-826	-0.7%	-230	-0.3%	-820	-1.1%	-55	-0.1%	-533	-1.0%	-31	-0.1%	-245	-0.8%
Gross impairment (accumulated 2010-2011)	-8,797	-7.3%	-11,386	-9.5%	-4,839	-6.2%	-6,572	-8.8%	-1,616	-3.2%	-2,476	-4.9%	-2,292	-7.7%	-2,927	-9.8%
AVAILABLE RESOURCES TO ABSORB IMPAIRMENTS																
Balance sheet loan loss reserves (end of 2009)	3,187	2.6%	3,187	2.6%	2,126	2.7%	2,126	2.7%	879	1.7%	879	1.7%	1,028	3.4%	1,028	3.4%
Pre-provision profit + capital gains (accumulated 2010-2011)	5,785	4.8%	5,548	4.6%	2,795	3.6%	2,685	3.5%	1,367	2.7%	1,313	2.6%	846	2.8%	814	2.7%
Taxes	-44	0.0%	663	0.6%	-20	0.0%	440	0.6%	-157	-0.3%	71	0.1%	105	0.4%	271	0.9%
Net impairment (accumulated 2010-2011)	131	0.1%	-1,988	-1.7%	61	0.1%	-1,321	-1.7%	472	0.9%	-214	-0.4%	-314	-1.1%	-814	-2.7%
IMPACT ON TIER 1 CAPITAL																
	Em	% RWA	Em	% RWA	Em	% RWA	Em	% RWA	Em	% RWA	Em	% RWA	Em	% RWA	Em	% RWA
Tier 1 at December 2009	8,457	9.1%	8,457	9.1%	5,211	9.0%	5,211	9.0%	2,291	7.5%	2,291	7.5%	1,974	10.5%	1,974	10.5%
+/- net impairment (accumulated 2010-2011)	131	0.1%	-1,988	-2.1%	61	0.1%	-1,321	-2.3%	472	1.5%	-214	-0.7%	-314	-1.7%	-814	-4.4%
+/- dividends, unused generic reserves and other items	-53	-0.1%	0	0.0%	282	0.5%	306	0.5%	-189	-0.6%	0	0.0%	-29	-0.2%	-29	-0.2%
Tier 1 at December 2011	8,535	9.2%	6,469	7.0%	5,554	9.6%	4,196	7.2%	2,574	8.4%	2,077	6.8%	1,631	8.7%	1,131	6.0%
FROB support to date	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Tier 1 at December 2011 after FROB	8,535	9.2%	6,469	7.0%	5,554	9.6%	4,196	7.2%	2,574	8.4%	2,077	6.8%	1,631	8.7%	1,131	6.0%
Addition capital required to reach 6% Tier 1 in 2011	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%

Source: Deutsche Bank

The results: Has Spain missed an opportunity to restore confidence?

Out of the 22 banks that exceeded the 6% tier 1 threshold, there were six below 6.5% and another three between 6.5% and 7%. Our concerns are therefore not so much related to the size of the capital shortfall (under some tougher hypothetical scenarios the amount would increase by only E3.5bn), but the potentially missed opportunity by Spain to use the stress test as a catalyst to promote a second wave of recapitalizations (especially considering that the potential incremental amount would have been easily manageable by the FROB). Whilst acknowledging that the assumptions in the adverse scenario may never materialize, we fear that the stress test results have left the door open to further speculation about whether the resolution of the issues surrounding some of the smaller institutions' solvency levels are being delayed. This might interrupt the restoration of market confidence (in light of market performance over the last few weeks) and, more importantly, make it difficult for these institutions to access term debt markets, one of the main issues the stress test was originally meant to address.

The results at a glance

Based on the CEBS/Bank of Spain release, there are five institutions that **do not** surpass the 6% Tier I threshold, namely Diada, Espiga, Banca Civica, Unnim and Cajasur. Unsurprisingly, all the failing institutions are saving banks. Before looking in detail at the published results, we should note that:

- Stress tests have been run for the resulting saving banks following the restructuring process that has taken place over the past few weeks;
- The capital base on which the stress test has been run **includes** the capital support received from the FROB (E10.5bn) and the Deposit Guarantee Fund – DFG (E3.7bn) by some of the institutions to date.

From a quantitative standpoint, Bank of Spain claims that the total amount of capital that the Spanish financial institutions would require under the strictest assumptions is E2bn, in addition to the E14.3bn already provided, thus bringing total capital support to E16.3bn. This figure falls below Deutsche Bank's estimate of E35bn, the IMF's E22bn and similar figures from other market participants. The E2bn therefore fails to match both our and market forecasts, something we believe is linked to the assumptions around PPP, capital gains and other items, rather than the severity of the loss rates (which we regard as sufficient). The 6% threshold is also questionable.

In Figure 15 and Figure 16 we summarize the details of the stress tests for the sector, the saving banks and the listed banks individually. In a nutshell, under the "adverse scenario" Bank of Spain estimates a gross impairment from credit and sovereign of E207bn, which in net terms (after PPP and loan loss provisions) is E28bn (1% of the system's assets). This would bring down the system Tier 1 from 9.5% at the end of 2009 to 8.3% in 2011.

Listed names have all passed the tests, with Santander and BBVA the most resilient and Pastor, with a 6% Tier 1, the weakest.

Figure 17: Spanish banks and saving banks: Tier 1 under the different scenarios

		Benchmark scenario	Adverse scenario	Adverse scenario+Sovereign shock		
	Tier 1 ratio at the end of 2009	Tier 1 ratio at the end of 2011	Tier 1 ratio at the end of 2011	Tier 1 ratio at the end of 2011	Fail/Pass	Total Tier 1 capital required to reach 6%
Santander	10.0%	11.0%	10.2%	10.0%	Pass	
BBVA	9.4%	10.6%	9.6%	9.3%	Pass	
JUPITER (*)	8.6%	8.8%	6.8%	6.3%	Pass	
LA CAIXA (*)	10.3%	10.6%	8.5%	7.7%	Pass	
BASE (*)	9.3%	10.5%	8.4%	7.8%	Pass	
Popular	9.1%	9.2%	7.5%	7.0%	Pass	
Sabadell	9.0%	9.6%	7.7%	7.2%	Pass	
DIADA (*)	6.6%	6.4%	4.5%	3.9%	Fail	1,032
BREOGAN (*)	8.6%	10.1%	7.8%	7.2%	Pass	
MARE NOSTRUM (*)	9.0%	9.7%	7.6%	7.0%	Pass	
Bankinter	7.5%	8.4%	7.6%	6.8%	Pass	
ESPIGA (*)	8.6%	8.2%	6.1%	5.6%	Fail	127
BANCA CIVICA (*)	9.6%	7.6%	5.2%	4.7%	Fail	406
Ibercaja	9.4%	9.1%	7.3%	6.7%	Pass	
UNICAJA (*)	11.8%	11.8%	9.6%	9.0%	Pass	
Pastor	10.5%	8.7%	6.8%	6.0%	Pass	
Cajasol/Guadalajara	10.3%	8.7%	6.6%	6.0%	Pass	
BBK	14.6%	17.4%	14.7%	14.1%	Pass	
UNNIM (*)	7.2%	6.6%	5.1%	4.5%	Fail	270
Kutxa	13.0%	12.6%	11.1%	10.6%	Pass	
CAI/Caja Circulo/Caja Badajoz	9.4%	8.8%	6.6%	6.1%	Pass	
CajaSur	1.8%	6.6%	4.9%	4.3%	Fail	208
Banca March	19.7%	20.8%	19.5%	19.0%	Pass	
Banco Guipuzcoano	9.1%	8.1%	6.6%	6.1%	Pass	
Vital Kutxa	11.3%	9.5%	7.5%	7.0%	Pass	
Caixa Ontinyent	8.9%	8.4%	6.6%	6.6%	Pass	
Caixa Pollanca	9.9%	9.1%	6.6%	6.2%	Pass	

Source: Deutsche Bank estimates and Bank of Spain; (*) JUPITER (Caja Madrid/Bancaja/Caixa Laietana/Caja Insular de Canarias/Caja Avila/Caja Segovia/Caja Rioja); LA CAIXA (La Caixa/Caixa Girona); BASE (Caja Ahorros del Mediterraneo/Cajastur+Caja Castilla la Mancha/Caja Cantabria/Caja Extremadura); CAM (Caja Ahorros del Mediterraneo/Cajastur+Caja Castilla la Mancha/Caja Cantabria/Caja Extremadura); DIADA (Caixa Catalunya/Caixa Tarragona/Caixa Manresa); ESPIGA (Caja España/Caja Duero); BREOGAN (Caixanova+Banco Gallego/Caixa Galicia); MARE NOSTRUM (Caja Murcia/Caixa Penedes/Sa nostra/Caja Granada); BANCA CIVICA (Caja Navarra/Caja General de Canarias/Caja Burgos); UNICAJA (Unicaja/Caja Jaen); UNNIM (Caixa Sabadell/Caixa Terrasa/Caixa Manlleu)

A number of institutions around the 6% level

Whereas only five banks failed the stress test, out of the 22 that exceeded the 6% Tier 1 threshold, there were six institutions below 6.5% and another three between 6.5% and 7%. See Figure 18 and Figure 19 for details.

Figure 18: Banks and saving banks whose Tier 1 ratio under the "adverse scenario" is between 6% and 7%**Below 6%**

DIADA	3.9%
CajaSur	4.3%
UNNIM	4.5%
BANCA CIVICA	4.7%
ESPIGA	5.6%

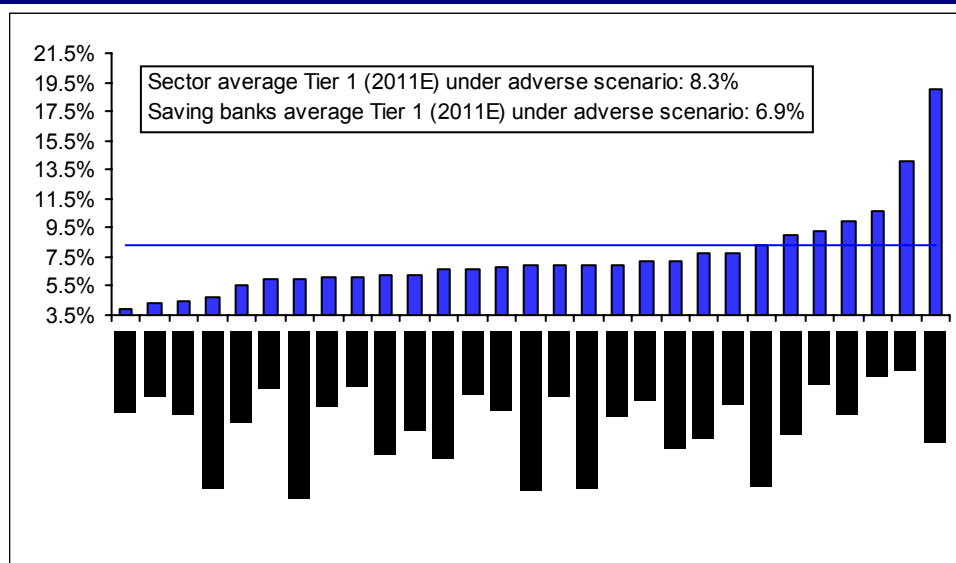
Above but very close to 6%

Pastor	6.0%
Cajasol/Guadalajara	6.0%
CAI/Caja Circulo/Caja Badajoz	6.1%
Banco Guipuzcoano	6.1%
Caixa Pollanca	6.2%
JUPITER	6.3%

Between 6.5-7%

Caixa Ontinyent	6.6%
Ibercaja	6.7%
Bankinter	6.8%

Source: Bank of Spain

Figure 19: Tier 1 ratio at the end of 2011 under adverse scenario and sovereign shock

Source: Deutsche Bank estimates and Bank of Spain

Is a 6% Tier 1 threshold enough? Would core Tier 1 have been a better benchmark?

Considering the (in some cases) large level of hybrids included under Tier 1 (150bps of total Tier 1 according to Bank of Spain), we do not find a 6% stated Tier 1 ratio target particularly challenging. We do, therefore, see a risk that banks will be pressured to recapitalize to 8% rather than 6%, and that "near misses" may also end up being expected to raise capital. Of the 27 institutions analyzed in the stress test, 21 are below an 8% Tier 1 ratio, including some listed names like Pastor (6% Tier 1), Bankinter (6.8% Tier1), Sabadell (7.2% Tier 1) and Popular (7% Tier 1). The aggregate capital shortfall under an 8% Tier 1 threshold would then be E13.2bn, compared with the E2bn shortfall under the 6% threshold.

Figure 20: Estimated capital shortfall under a hypothetical 8% Tier 1 threshold

LISTED INSTITUTIONS	Santander	BBVA	Popular	Sabadell	Bankinter	Pastor
Tier 1 ratio at December 2011 after FROB and under "adverse scenario"	10.0%	9.3%	7.0%	7.2%	6.8%	6.0%
bps above/(below) a hypothetical 8% threshold	2.0%	1.3%	-1.0%	-0.8%	-1.2%	-2.0%
Capital require to reach 8%			-924	-466	-367	-377
Capital require to reach 8% (accumulated)			-924	-1,390	-1,757	-2,134
NON LISTED INSTITUTIONS						
Number of institutions below a hypothetical 8% threshold	17					
Combined amount of capital require to reach 8%	-11,142					
Number of institutions above a hypothetical 8% threshold	4					
Grand total capital require to reach 8% (listed and non-listed)	-13,276					

Re-running the stress test results under slightly different assumptions

No doubt the E2bn incremental capital shortfall coming from the stress test is sticking, although it falls below our forecasts and market expectations. Whilst we regard the impairment assumptions (both on sovereign and credit) as severe enough, we have expressed our concerns about the assumptions used on PPP, capital gains and the line called "dividends, unused generic reserves and other items", especially considering the large number of institutions whose Tier 1 under the "adverse scenario" falls very close to the 6% threshold. We therefore want to provide a feel for what would have hypothetically been the capital shortfall under slightly different assumptions for PPP, capital gains and the line called "dividends, unused generic reserves and other items".

PLEASE NOTE that with the exercises run below we do not try to suggest that the stress test results are wrong. Rather, given that visibility on these assumptions is limited (as is the likelihood of the scenario actually occurring), and that the small capital shortfall for the sector under the stress test has surprised us, we wanted to provide the reader with a "reconciliation exercise" that could shed some light on the analysis of the results while showing how sensitive they are to small changes in assumptions.

In Figure 21 we summarize the system capital shortfall re-stated following the three sensitivity analyses done below. All in all, we arrive at an incremental capital shortfall under our hypothetical scenarios of E3.5bn, which would bring the grand total to E20bn (E14.3bn granted so far by the FROB, plus E2bn disclosed on Friday and our incremental E3.5bn). Unsurprisingly, the number of institutions with a Tier 1 below 6.5% would increase to 16, compared to 11 now.

Figure 21: Summary of additional capital requirements under some hypothetical scenarios

	Current forecast under "adverse scenario"	PPP sensitivity (*)	Delta vs Current	Capital gains sensitivity	Delta vs Current	"Dividend and others" sensitivity	Delta vs Current	Total deltas
Capital shortfall estimate	2,042	2,666	624	2,315	273	4,677	2,635	3,532
Number of institutions below the 6% Tier 1 threshold	5	9	4	8	3	9	4	4
Number of institutions below 6.5% Tier 1 threshold	11	16	5	16	5	14	3	4

Source: Deutsche Bank estimates

- **Sensitivity to PPP forecasts:** Assuming a 10% reduction in the PPP forecasts under the "adverse scenario", the total capital shortfall would increase from E2bn to E2.33bn. If the reduction in PPP is 20% the capital shortfall increases to E2.66bn. In both cases a total nine institutions (instead of five) would fail to exceed the 6% Tier 1 threshold.

Figure 22: Estimated capital shortfall under a hypothetical PPP reduction versus current forecasts

	SAN	BBVA	Popular	Sabadell	Bankinter	Pastor
	Adverse	Adverse	Adverse	Adverse	Adverse	Adverse
LISTED INSTITUTIONS						
Tier 1 ratio at December 2011 after FROB	10.0%	9.3%	7.0%	7.2%	6.8%	6.0%
Tier 1 capital at December 2011 with a 10% lower than currently expected PPP	54,573	27,312	6,053	3,995	1,980	1,070
Tier 1 ratio at December 2011 with a 10% lower than currently expected PPP	9.37%	8.78%	6.55%	6.85%	6.48%	5.68%
Tier 1 capital at December 2011 with a 20% lower than currently expected PPP	51,303	25,776	5,637	3,794	1,881	1,009
Tier 1 ratio at December 2011 with a 20% lower than currently expected PPP	8.81%	8.29%	6.10%	6.51%	6.16%	5.35%
Capital required to reach 6% after reducing PPP forecasts by 10%	19,622	8,655	508	498	146	-61
Capital required to reach 6% after reducing PPP forecasts by 20%	16,352	7,119	92	297	48	-122
NON-LISTED INSTITUTIONS						
Current number of institutions above the 6% threshold under "adverse scenario"	16					
Current number of institutions below the 6% threshold under "adverse scenario"	5					
Combined amount of capital required to reach 6%	2,042					
Number of institutions above the 6% threshold under after reducing PPP forecasts by 10%	13					
Number of institutions below the 6% threshold under after reducing PPP forecasts by 10%	8					
Combined amount of capital required to reach 6%	-2,268					
Number of institutions above the 6% threshold under after reducing PPP forecasts by 20%	13					
Number of institutions below the 6% threshold under after reducing PPP forecasts by 20%	8					
Combined amount of capital required to reach 6%	-2,544					
Grand total for the system with 10% cut in PPP	-2,329					
Grand total for the system with 20% cut in PPP	-2,666					

Source: Deutsche Bank estimates and Bank of Spain

- **Sensitivity to capital gains:** Assuming that the forecast capital gains are not considered for any of the players (for some they have a positive impact whereas for others quite negative), the total capital shortfall would increase to E2.3bn. In total, nine institutions (instead of five) would fail to exceed the 6% Tier 1 threshold.

Figure 23: Estimated capital shortfall under a hypothetical elimination of capital gains from current PPP forecasts

	Santander	BBVA	Popular	Sabadell	Bankinter	Pastor
	Adverse	Adverse	Adverse	Adverse	Adverse	Adverse
GAP between CEBS and Bank of Spain's cumulative PPP	-2,138	-1,298	1,050	600	295	200
Tier 1 capital at December 2011 EXCLUDING the GAP	59,446	29,820	5,681	3,746	1,857	981
Tier 1 ratio at December 2011 EXCLUDING the GAP	10.2%	9.6%	6.1%	6.4%	6.1%	5.2%
Capital required to reach 6% after EXCLUDING the GAP	24,495	11,163	136	250	23	-150

NON-LISTED INSTITUTIONS

Current number of institutions above the 6% threshold under "adverse scenario"	16
o/w with a Tier 1 between 6-6.5%	6
Current number of institutions below the 6% threshold under "adverse scenario"	5
Combined amount of capital required to reach 6%	2,042

Number of institutions above the 6% threshold once capital gains excluded	13
o/w with a Tier 1 between 6-6.5%	4
Number of institutions below the 6% threshold once capital gains excluded	8
Combined amount of capital required to reach 6%	-2,165

Grand total for the system **-2,315**

Source: Deutsche Bank estimates and Bank of Spain

- **Sensitivity to "dividends, unused generic reserves and other items":** Assuming that this line is not considered for any of the players (for some this would have a positive impact whereas for others quite negative), the total capital shortfall would increase to E4.6bn. In total nine institutions (instead of five) would fail to exceed the 6% Tier 1 threshold.

Figure 24: Estimated capital shortfall under a hypothetical elimination of "dividends, unused generic reserves and other items" from current forecasts

	Santander	BBVA	Popular	Sabadell	Bankinter	Pastor
LISTED INSTITUTIONS	Adverse	Adverse	Adverse	Adverse	Adverse	Adverse
+/- dividends, unused generic reserves and other items	-8,730	-2,561	0	306	0	-29
Tier 1 at December 2011	58,251	28,918	6,469	4,196	2,077	1,131
REVISED Tier 1 at December 2011 EXCLUDING "dividends, unused generic reserves and other items"	66,981	31,479	6,469	3,890	2,077	1,160
Tier 1 ratio at December 2011 EXCLUDING "dividends, unused generic reserves and other items"	11.5%	10.1%	7.0%	6.7%	6.8%	6.2%
Additional capital required to reach 6% Tier 1 in 2011 under REVISED assumption	0	0	0	0	0	0

NON-LISTED INSTITUTIONS

Current number of institutions above the 6% threshold under "adverse scenario"	16
Current number of institutions below the 6% threshold under "adverse scenario"	5
Combined amount of capital required to reach 6%	2,042

Number of institutions above the 6% threshold under "adverse scenario" EXCLUDING "dividends, unused generic reserves and other items"	12
Number of institutions below the 6% threshold under "adverse scenario" EXCLUDING "dividends, unused generic reserves and other items"	9
Combined amount of capital required to reach 6%	4,677

Combined amount of capital required to reach 8% **4,677**

Source: Deutsche Bank estimates and Bank of Spain

FROB's next steps

Let's summarize Bank of Spain statement on this front:

"Nevertheless, as these four institutions (excluding Cajasur which has been sold to BBK) do not reach the level set by Ecofin, they will have to submit private recapitalisation plans. If need be, the FROB would be in a position to inject, at any time, sufficient Tier 1 own funds to enable them to reach this benchmark level. The amount of these potential capital injections is perfectly assumable".

During the presentation held in Madrid on Friday, when asked about the possible next steps for the entities that passed the test but are very close to 6%, Bank of Spain was quite clear, saying that: (1) the 6% threshold is already 50% more than the legal requirement; and (2) the tests have been run under a very stressed and unlikely scenario.

In terms of timing, we did not perceive any urgency to act in relation to the four institutions that failed to pass the tests (we exclude Cajasur, as although it failed to pass the test, the Bank of Spain had already intervened). Bank of Spain argued that "we are far from that stress scenario and those institutions are not breaching the regulation".

Listed names: unsurprisingly, all passed

Whilst the market's focus will be on the overall Spanish system and the Cajas in particular, it's necessary to highlight the resilience proven by the listed names (with the exception of Pastor, which came in at the low end of the Tier 1 range, at 6%). This was well flagged by some Government officials and does not surprise us if we look back at the stress test exercises that we have run and presented in different pieces of research in the past (*"Spanish Domestic Banks: Challenges persist but are priced in"*, dated 12 April 2010; and *"Santander / BBVA: Standing out from the crowd"*, dated 4 June 2009).

As presented in Figure 15 and Figure 16 earlier in this section, Spanish listed names (Santander, BBVA, Banco Popular, Banco Sabadell, Bankinter and Banco Pastor) emerge from the stress test as having sufficiently comfortable Tier 1 capital ratios (i.e. in excess of 6%), even under the most severe of the scenarios. Within our universe, Santander and BBVA stand out as the most solid players.

RETAIL BANKS - What did our stress test analysis suggest?

Our stress test analysis considered the loan-loss provision buffer build up over the past few years, the high pre-provision margins, a conservative 40% loss given the default rate for the overall loan book in default, a 2.5x higher NPL than our current peak forecasts, an additional write-off equivalent to 30% of the purchased assets (which would put total provisions to assets purchased at 50-60%), and an incremental 5-7% reduction in our net interest income estimates.

The main conclusion of our analysis is that even assuming what we understand is a very stressed (and in our view unlikely) level of credit losses and a further reduction in NII, we estimate that the accumulated 2010-2011 pre-provision profit should be sufficient to largely cover the potential losses derived from our exercise, which would ultimately mean not being a loss-making bank – not particularly inspiring, but reassuring in regard to solvency and BV resilience versus 2009 levels.

INTERNATIONAL BANKS (SAN / BBVA) - What did our stress test analysis suggest?

In our report *"Santander / BBVA: Standing out from the crowd"*, dated 4 June 2009, we ran a stress test exercise similar to that performed by the US Federal Reserve. For this exercise we broke down Santander's and BBVA's consolidated loan books into as similar as possible categories, as was done in the US. We then assumed a two-year peak default rate as well as

a recovery ratio, so we could conclude what could potentially be, in a stress situation, the maximum accumulated loss rate that would need to be assumed by the banks' earnings and, ultimately, by their equity.

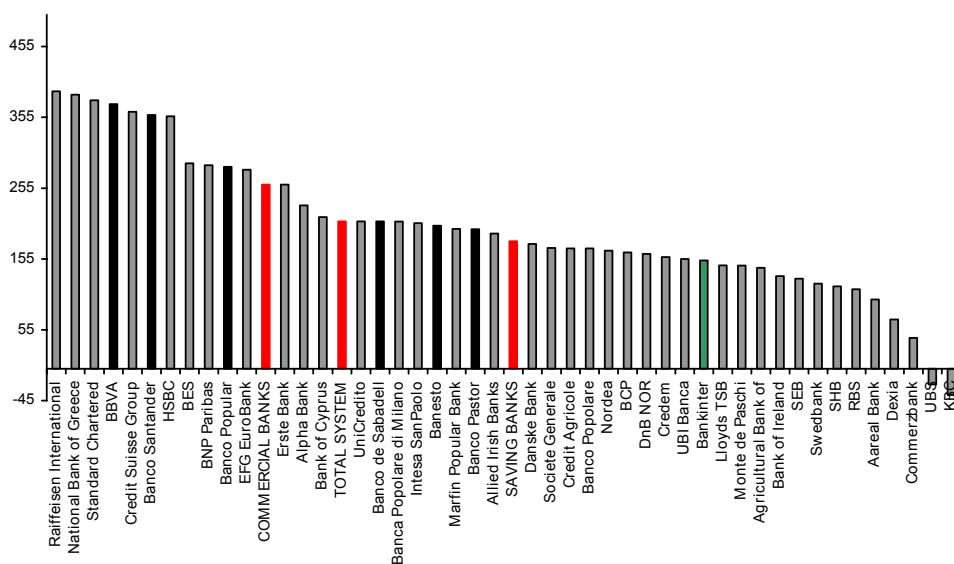
We assumed a peak default rate of close to 14-15% in both cases, which at that time meant multiplying the NPL level reported by both banks at the end of 2008 by more than seven times (between three and five times higher than Q1 2010 NPL levels). We assumed different recovery rates depending on the type of product and geographical exposure.

The main conclusion was that even under our stressed scenario, which would drive the accumulated cost of risk of Santander to 510bps and BBVA to 542bps (i.e. around 3.3 times higher than what we regard as a normalized annual level), both banks' forecast two-year accumulated pre-provision profit would exceed the incremental charge-offs, thus leaving both names in positive net profit territory.

What explains this resilience?

Whereas the NPL, levels of LGD and current stock of provisions are critical to explaining the banks' resilience, we would highlight Spanish banks' richer pre-provision margins vis-à-vis their European peers, giving them a high capacity to absorb higher loan losses. This superior margin is largely the result of their purely retail business profile and efficient cost structures.

Figure 25: Pre-provision margin comparison (2009)



Source: Deutsche Bank estimates and company data

The FROB, the Spanish backstop solution for capital support

To refresh some readers' mind, in June 2009, the Spanish Congress approved the creation of the FROB (Spanish for "Fund for the Orderly Restructuring of the Banking Sector") in response to the need to restructure or resize the Spanish banking sector, especially the savings banks. The main aim of the FROB was avoiding "potential systemic risks in Spain's financial system derived from smaller players' failure". Achieving this goal could be done via:

- **The search for and thereafter support of private solutions.** This process, ended on 30 June, was done either through full merger and/or IPS (Institutional Protection Schemes). The latter is based on contractual agreements between participating institutions, with a central common institution (a credit institution with the status of a bank) usually created

and charged with determining essential management aspects. See Figure 26 for a summary.

- **Capital injections:** This may be done in combination with the previous point, although it is not necessary to request capital support from the FROB if a group of institutions are involved in an integration process.
- **Formal intervention** by the FROB in insolvent institutions unable to find a private solution. To date, the only interventions have been in Caja Castilla la Mancha (March 2009) and Cajasur (May 2010), both of which have already been sold to third parties.

Addressing the FROB's size, the limits to how much it can provide, and its timeframe

With an equity base of E9bn, the FROB is authorized to leverage that up 3x (to E27bn) through the issuance of debt guaranteed by the Spanish state, although should more be needed, it may get authorization to increase the total amount to E99bn. The FROB is mainly a capital-support vehicle and the main support instrument is the purchase of preferred shares issued by the banks or cajas. These preferred shares would have a cost of 7.75% and would have to be paid back after 5-7 years. Failing to do this would mean a conversion into "ordinary" shares. Note that the FROB complements but does not replace the Deposit Guarantee Fund (financed by contributions from banks, saving banks and cooperative banks). The three DGFs have E5bn of available funds.

Two clarifications now: (1) the maximum amount that the FROB is initially entitled to provide to a credit institution; and (2) how long the FROB can continue to provide capital support.

- Under European rules, capital support packages are initially limited to an amount equivalent to 2% of RWA, this limit being imposed on the basis that "financial institutions getting capital support are broadly solid".

This said, this 2% limit can be surpassed (for example Caixa Catalu a is actually receiving an amount in excess of 2% of its RWA), subject to approval from Brussels. The main implication of exceeding this limit is that the process to get capital support is lengthier (if the amount is below the 2% approval by Brussels is almost automatic) and with much higher requirements/conditions on the banking activity of the institution that gets the funds.

In the case of operations with merger/IPS plans approved by the Bank of Spain and aid approved by the FROB, these plans include a reduction of 10%-30% in the number of branches, and a reduction of 11%-27% in staff.

- In terms of timing, 30 June 2010 was the deadline for tapping into the FROB, according to European agreements. Since recapitalizing banks is akin to a national government subsidy, potentially in contradiction with EU competition rules, no unilateral move is possible. On 13 July, Spain's finance minister Elena Salgado officially requested permission to extend the deadline on the FROB during the ECOFIN meeting in Brussels. On Friday 23 July, this permission was granted, so the use of the FROB can be extended until 31 December 2010.

Recent regulatory changes increase the FROB's scope of action

On 13 July, the Spanish Government approved a decree-law containing some modifications affecting the use of the FROB, which we believe will prove very relevant should more funds be required following the publication of the stress test results. The main changes are:

- The FROB will be allowed to inject capital into banks and saving banks that "whilst solvent and perfectly viable, might not be sufficiently resilient in situation of extraordinary distress". Under the new rules, additional funds may be requested by banks/saving banks that to date have not been involved in the restructuring process (and therefore have not

requested funds), but also by those saving banks that have already requested capital support from the FROB but may consider, in light of the stress-test results, the funds received to be insufficient.

- Under the new rules, those institutions willing (or forced) to ask for more funds from the FROB, will NOT need to be involved in a merger/integration process in order to be entitled to receive capital support. The only requirement will be the submission of a viability plan that will have to be approved by Bank of Spain (and we presumably also the EC) and that most likely will encompass some requirements in terms of branch/staff reductions.

Saving banks' legal framework has been adjusted as well

Not only has the use of the FROB been affected by regulatory changes, but so have some of the rules regarding saving banks' management bodies and capital structure. In summary, the main changes refer to:

- **The management of saving banks:** A number of limitations and requirements have been introduced in regard to the management bodies running the saving banks in order to enhance the level of professionalism and reduce the presence of elected public officials in the saving banks' governing bodies.
- **Capital instruments:** Saving banks will be able to sell up to 50% of their equity to private investors and, unlike current instruments, the new cuotas participativas will have economic and political rights similar to (if not the same as) any other traditional equity instrument.

We regard these changes as positive and relevant as they will provide the cajas with the same options as commercial banks when raising equity. Moreover, those saving banks willing to access equity markets will be forced to enhance transparency whilst being more profitability/solvency-oriented.

New saving banks' map: How much has been provided by the FROB (to date) and what institutions have benefited from it?

We provide below some data points on the restructuring process that the saving banks sector has gone through as well as the total use of the FROB's funds compared with what is already available. In Figure 26 we summarize the full list of institutions and the capital support approved to date by the FROB.

- At present, the funds available for undertaking the restructuring processes of credit institutions amount to E12bn. This amount held by the FROB is made up of E9bn of equity (E6.75bn provided by the Treasury and E2.25bn by the Deposit Guarantee Fund) and E3bn of debt financing, which was obtained in November 2009 through the inaugural (and to date only) 3-year bond issuance.
- In a nutshell, the FROB has approved E10.5bn of capital support (including the E392m for Cajasur), thus leaving E1.5bn unused. The E10.5bn does not include the E3.7bn of capital support to Caja Castilla la Mancha (CCM) as it was provided by the Deposit Guarantee Fund in 2009.
- The restructuring process involving saving banks finished on June 30, with a total of 12 integration processes involving 38 of the 45 Spanish savings banks. Considering that Cajasur (in which Bank of Spain intervened) has been sold to BBK, in total 39 savings banks are participating in the restructuring of the sector, with only six savings banks not involved. These six institutions represented 8% of the savings banks' total assets as of 31 December 2009.

- Of the 12 processes, six requested aid from the FROB totalling E10.2bn and five were undertaken without public aid. The total aid provided by the FROB should increase to E11bn once we include the E800m provided to BBK for its acquisition of Cajasur.

Figure 26: Saving banks map after restructuring and the funds received from the FROB

	Institutions involved	Number of processes	Total assets (in Ebn)	Integration procedure	As a % of saving banks assets	Funds received from the FROB (in Em)
Operations with FROB aid (in brackets the institutions involved)						
	26	7	768.3		59.7%	
1. BASE (Caja Ahorros del Mediterraneo/Cajastur+Caja Castilla la Mancha/Caja Cantabria/Caja Extremadura)	5	1	127.3	IPS	9.9%	1,493
2. DIADA (Caixa Catalunya/Caixa Tarragona/Caixa Manresa)	3	1	79.3	Merger	6.2%	1,250
3. ESPIGA (Caja España/Caja Duero)	2	1	46.4	Merger	3.6%	525
4. UNNIM (Caixa Sabadell/Caixa Terrasa/Caixa Manlleu)	3	1	28.5	Merger	2.2%	380
5. BREOGAN (Caixanova+Banco Gallego/Caixa Galicia)	2	1	77.5	Merger	6.0%	1,162
6. JUPITER (Caja Madrid/Bancaja/Caixa Laietana/Caja Insular de Canarias/Caja Avila/Caja Segovia/Caja Rioja)	7	1	337.3	IPS	26.2%	4,465
7. MARE NOSTRUM (Caja Murcia/Caixa Penedes/Sa nostra/Caja Granada)	4	1	72.1	IPS	5.6%	916
Operations without FROB aid						
	12	5	393.7		30.6%	
1. BANCA CIVICA (Caja Navarra/Caja General de Canarias/Caja Burgos)	3	1	45.7	IPS	3.6%	
2. UNICAJA (Unicaja/Caja Jaen)	2	1	35.2	Merger	2.7%	
3. CAIXA (La Caixa/Caixa Girona)	2	1	260.6	Merger	20.2%	
4. Cajasol/Guadalajara	2	1	31.5	Merger	2.4%	
5. Caja Inmaculada/Caja circulo Burgos/Caja Badajoz	3	1	20.8	IPS	1.6%	
Institutions that remained independent						
	6		106.0		8.2%	
1. Ibercaja	1		44.6		3.5%	
2. BBK+Cajasur (***)	1		29.8		2.3%	
3. Kutxa	1		21.1		1.6%	
4. Vital	1		9.2		0.7%	
5. Caixa Ontinyent	1		0.98		0.1%	
6. Caixa Pollanca	1		0.34		0.0%	
Institutions taken over by Bank of Spain						
	2		19.6		1.5%	
1. Caja Castilla la Mancha - CCM (*)	1					3,775 (**)
2. Cajasur (***)	1		19.6		1.5%	392
TOTAL (**)	46		1,288		100.0%	10,583

Source: Deutsche Bank estimates; (*) Involved in one of the merger processes – CAM; (**) The E3.7bn perceived by CCM were provided by the Deposit guarantee Fund, thus we do not included in the total provided by the FROB; (***) BBK will perceive E800m from the FROB

The FROB's funding – A decreasing (but still persistent) concern

While the need for additional capital injections following the publication of the stress test results is fairly limited, the question mark around the FROB's ability to issue debt and therefore fund additional capital injections will persist. Whilst the performance of debt capital markets over the coming weeks and months is uncertain, we should highlight the fact that Spain has been successfully placing its debt over the past few weeks, a reassuring sign when it comes to the FROB's potential funding needs. In Figure 27 we summarize Spain's debt placements in June and July, providing the different maturities and the oversubscription rate.

Figure 27: Spanish Treasury recent debt placements (June-July 2010)

Auction date	Maturity date	Nominal bid amount	Nominal allotted amount	Cover ratio	Weighted average price
10 June 2010	Oct 2013	8,252	3,903	2.1x	3.32%
15 June 2010	Jun 2011	6,261	4,180	1.5x	2.30%
15 June 2010	Dec 2011	3,469	988	3.5x	2.84%
17 June 2010	Apr 2020	5,657	3,000	1.9x	4.86%
17 June 2010	Jul 2041	479	101	2.5x	5.91%
22 June 2010	Sept 2010	5,815	1,138	5.1x	0.91%
22 June 2010	Dec 2010	7,079	2,882	2.5x	1.58%
1 July 2010	Apr 2015	5,968	3,500	1.7x	3.66%
7 July 2010 (*)	Oct 2020	14,500	6,000	2.4x	4.87%
15 July 2010	Jul 2025	7,722	2,999	2.6x	5.12%
20 July 2010	Jul 2011	8,300	4,248	2.0x	2.22%
20 July 2010	Dec 2011	4,194	1,720	2.4x	2.33%
Total in June and July		77,695	34,660	2.2x	

Source: Deutsche Bank estimates and Spanish Treasury; (*) Syndicated placing

Valuation and risks

Spain's macro outlook is no doubt challenging and Spanish financial institutions are facing what might be the toughest year in a decade. With the disappointing stress test results, still-poor sentiment and visibility may prove the main short-term headwinds. We therefore believe a very cautious general approach is necessary, especially with respect to Spanish domestic banks. We still prefer Santander and BBVA based on their undemanding valuation, comfortable capital and funding position, proven P&L resilience (even under more severe conditions as shown by the stress test results) and attractive earnings diversification.

Figure 28: Spanish banks – valuation summary ()**

	SAN	BBVA	POP	SABE	BTO	BKT	PAS							
Rating	Buy	Buy	Hold	Hold	Hold	Hold	Hold							
Target price	14..1	14.5	6.2	4.0	10.2	6.0	4.6							
	2010E	2011E	2010E	2011E	2010E	2011E	2010E	2011E	2010E	2011E	2010E	2011E	2010E	2011E
	SAN	SAN	BBVA	BBVA	POP	POP	SABE	SABE	BTO	BTO	BKT	BKT	PAS	PAS
EPS	1.06	1.35	1.28	1.63	0.37	0.56	-0.01	0.31	0.89	1.08	0.38	0.48	0.22	0.40
NAV	5.83	6.50	6.93	7.75	5.78	6.12	3.79	3.98	8.30	8.95	5.40	5.69	5.59	5.85
Price (*)	9.98	9.98	9.75	9.75	4.80	4.80	4.19	4.19	7.50	7.50	5.61	5.61	3.90	3.90
P/E	9.5x	7.5x	7.7x	6.0x	11.5x	8.4x	15.7x	13.5x	7.6x	6.9x	15.4x	11.7x	12.9x	9.8x
Eurobanks P/E	12.6x	8.5x	12.6x	8.5x	12.6x	8.5x	12.6x	8.5x	12.6x	8.5x	12.6x	8.5x	12.6x	8.5x
P/NAV	1.7x	1.6x	1.4x	1.3x	0.8x	0.8x	1.1x	1.0x	0.9x	0.8x	1.0x	1.0x	0.7x	0.7x
Eurobanks P/NAV	1.2x	1.1x	1.2x	1.1x	1.2x	1.1x	1.2x	1.1x	1.2x	1.1x	1.2x	1.1x	1.2x	1.1x
RoNAV	19.1%	22%	19.5%	22.2%	6.6%	9.5%	-0.3%	8.0%	11.1%	12.5%	7.0%	8.6%	4.0%	6.9%
Eurobanks RoNAV	10.2%	13.5%	10.2%	13.5%	10.2%	13.5%	10.2%	13.5%	10.2%	13.5%	10.2%	13.5%	10.2%	13.5%

Source: Deutsche Bank estimates and Reuters. (*) Prices as of closing of July 23; (**) POP: Banco Popular; SABE: Banco Sabadell; SAN: Banco Santander; BTO: Banesto; BKT: Bankinter; PAS: Banco Pastor

Investors looking to benefit from a potential normalization of market sentiment should do it through Santander and BBVA

- **Santander (Buy – E14.1)** - Despite the recent strong share price performance, the stock trades at 7.1x 2011E earnings, 1.5x P/TE, and a RoTE of 22%, a not too demanding valuation considering Banco Santander's comfortable capital and funding position, proven resilient P&L, earnings diversification, and restructuring angle in Brazil and the UK through the integration of ABN and A&L.
- **BBVA (Buy – E14.5)** - With an RoTE of 22% in 2011E (up from 19% in 2010E) and EPS growth of 27% in 2011E, the 1.2x P/TE (2011E) and 5.8x P/E (2012E) appear undemanding, particularly given BBVA's strong fundamentals, namely its comfortable capital position, ongoing earnings generation, almost exclusive retail banking focus (and thus relative immunity to upcoming regulatory changes) and one of the highest pre-provision margins in European banking – which provide BBVA with an unequalled line of defence for earnings and capital.

Valuation methodology

Domestic banks

Our price targets are derived from a single-stage target P/Tangible Equity (TE) multiple model, incorporating the bank's sustainable ROTE, cost of equity (CoE), and long-term growth. We calculate the target P/TE as the sustainable ROTE, less the terminal growth rate (ROTE-g)

divided by the CoE less terminal growth (CoE-g). For terminal growth (g) we use 2% (based on long-term nominal GDP growth). We use a CoE of 10%, the main assumptions being: 1) Spanish 10-year treasury yield of 3.9%; 2) equity risk premium of 6%; and 3) beta of 1.0. We use the following RoTE assumptions: 11% for Popular, Sabadell and Bankinter, 12% for Banesto, and 9% for Banco Pastor.

We define the bank's long-term sustainable RoTE in our valuation, and therefore the implied P/TE, based on the following factors: 1) the group's short- and long-term profitability prospects; 2) the level of earnings visibility; 3) European banks' P/TE levels and their profitability ratios; 4) the bank's current capital position and how resilient we believe the book value/solvency levels could be in the future; 5) upside or downside potential to earnings; 6) potential upcoming negative/positive news flow on the stock or the markets in which it operates; and 7) market sentiment and perceptions.

Santander

Owing to the variety of business units and geographies, we use a sum-of-the-parts valuation to generate our target price for Santander, using comparable market multiples from companies that are similar in business, geographical and risk profile. The valuation multiples range from 9x earnings for Santander's domestic business to 13x for Santander's Latam operations. For the Latam business multiples, we use the estimates of Deutsche Bank's Latam Bank analyst, while for European business multiples, we take our estimates from the Deutsche Bank European Banks team stocks under coverage. The only exception to this approach is Brazil, for which we use market valuation multiples from comparable listed banks. This is done in an attempt to reflect Santander's plans to IPO its Brazilian business, which we assume will ultimately move the valuation methodology towards market value. We apply a 10% discount to conglomerate banks, as we do across the Deutsche Bank European Banks coverage universe, to reflect the penalty we believe the market applies for, *inter alia*, lesser transparency, weaker management focus on each business, and reinvestment risk. We apply the conglomerate discount to banks that operate across different geographies or business lines, as opposed to applying it on scale grounds.

Figure 29: Santander sum-of-the-parts valuation

	Net profit (Em)	Value (Em)	Price per share	P/E (x)
Continental Europe	4,716.7	51,790.4	6.0	
Santander retail	2,225.8	20,031.9	2.32	9.0x
Banesto	797.2	7,175.0	0.83	9.0x
Consumer Finance	903.7	9,941.1	1.15	11.0x
Portugal	536.1	5,360.7	0.62	10.0x
Others in Continental Europe (Banif, AM, Wholesale)	928.2	9,281.6	1.07	10.0x
UK	2,149.9	19,349.1	2.24	9.0x
US	350.7	3,155.9	0.36	9.0x
Latam	5,136.9	64,832.8	7.5	
Brazil	3,189.6	41,464.4	4.79	13.0x
Mexico	664.2	7,970.2	0.92	12.0x
Chile	756.9	9,083.4	1.05	12.0x
Other Latam	526.2	6,314.8	0.73	12.0x
Excess/(Lack) Capital		14,480.8	1.67	1x BV
Corporate Center and unallocated items	-649	(5,838.4)	-0.67	9.0x
Total valuation		147,771	17.1	
Value in 12-months and applying 10% conglomerate discount		122,012	14.1	

Source: Deutsche Bank estimates and company data

BBVA

We derive our target price for BBVA from a SOTP valuation that uses comparable market multiples. For the Latam business multiples (9.0x), we use the estimates of Deutsche Bank's Latam analyst, and for the European business multiples (9.0x), we take our estimates from the stocks covered by the Deutsche Bank European Banks team. For a meaningful comparison, we use multiples from companies that have similar business, geographical and risk profiles. We also apply a 10% discount to conglomerate banks, as we do across the Deutsche Bank European Banks coverage universe. This reflects the penalty that we believe the market applies for, *inter alia*, lesser transparency, weaker management focus on each business, and reinvestment risk. We apply the conglomerate discount to banks that operate across different geographies or business lines, as opposed to applying it according to scale.

Figure 30: BBVA – Sum-of-the-parts valuation

	Net profit	Value	Value per	P/E
	(E m)	(E m)	share	(x)
Spain and Portugal	2,399	21,594	5.5	9.0x
Global Banking and Asset Management	1,873	18,731	4.8	
Corporate and Investment Banking	1,574	15,736	4.0	10.0x
Global Markets	305	3,055	0.8	10.0x
Others in Global Markets	-6	(60)	0.0	10.0x
Mexico	831	7,479	1.9	
Bancomer	724	6,516	1.7	9.0x
Pensions and Insurance Mexico	142	1,281	0.3	9.0x
Others in Mexico	-35	(318)	-0.1	9.0x
US	441	3,528	0.9	8.0x
South America	1,059	9,532	2.4	
Banking South America	560	5,037	1.3	9.0x
Pensions and Insurance South America	349	3,145	0.8	9.0x
Others in South America	150	1,350	0.3	9.0x
Excess/(Lack) capital		9,049	2.3	1x BV
Corporate center and unallocated items	-217	(1,949)	-0.5	9.0x
Total valuation		67,965	17.4	
Value in 12-months and applying 10% conglomerate discount		56,695	14.5	

Source: Deutsche Bank estimates

Risks

We see a number of common generic risks, all of which are related to the Spanish macro outlook, the ECB's monetary policy, the development of credit quality, and the Spanish housing market. For Santander and BBVA, other generic risks include a possible deterioration in the macroeconomic and currency environment in the countries in which the banks operate.

In our view, the key company-specific risks by bank are:

- Popular (Hold): Popular has traditionally been one of the Spanish banking stocks with the highest levels of stock borrowing, and could experience a sharp upward correction should a short-covering squeeze take place. Other upside risks to our Hold recommendation include delivering better NPL ratios than the ones guided by the company or Popular managing to sell its branch network, which would provide the company with an extra buffer (not incorporated in our forecasts) to face upcoming challenges. The opposite would represent a downside risk.

- Banesto (Hold): Main company-specific downside risks include a Banesto decision to recapitalize in anticipation of a tighter regulatory environment. Main upside risks include a possible Santander (its main shareholder with an 88% stake) decision to buy out its minorities. Exceeding or not meeting its RoE/market share objectives could also be an upside/downside.
- Bankinter (Hold): Key company-specific downside risks include the prospect that Bankinter decides to recapitalize in anticipation of a tighter regulatory environment. Key upside risks include a sharp and quicker steepening of the yield curve, given Bankinter's greater-than-average exposure to mortgages. The opposite would represent an upside risk.
- Pastor (Hold): The main company-specific upside risks are capital gains exceeding the amount expected to be generated in the coming quarters through asset disposals. The company could also be the subject of M&A rumours. Finally, given the high percentage of Pastor's loan book with interest floors, any news in relation to these not being eliminated would be well perceived. The opposite would represent a downside risk.
- Sabadell (Hold): The main company-specific upside risks include a sharp improvement in the real estate sector (Sabadell is more exposed than some of its peers on average), delivering better NPL ratios than the ones guided by the company and/or if Sabadell manages to sell its branch network, which would provide the company with an extra buffer (not incorporated in our forecasts) to face upcoming challenges. Finally, and given Sabadell's high portion of its loan book with interest floors, any news vis-à-vis these not being eliminated would be well perceived. The opposite would represent a downside risk.
- Santander (Buy): Company-specific downside risks include: 1) not delivering on EPS growth targets announced during its investor day; 2) not delivering on the cost and revenue synergies announced following the acquisitions of ABN Banco Real, Alliance & Leicester, Bradford & Bingley, and Sovereign; 3) not being able to successfully implement the IT platform at A&L; and 4) the uncertainties related to the sustainability of Santander's capital base after its rights issue.
- BBVA (Buy): Company-specific downside risks are: 1) not delivering on targets for divisional loan growth announced on its investor day; 2) not achieving the cost and revenue synergies announced following the acquisition of Compass; and 3) sales of assets not being made and/or done at a much lower price than expected.

Appendix 1

Important Disclosures

Additional information available upon request

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Equity rating key

Equity rating dispersion and banking relationships

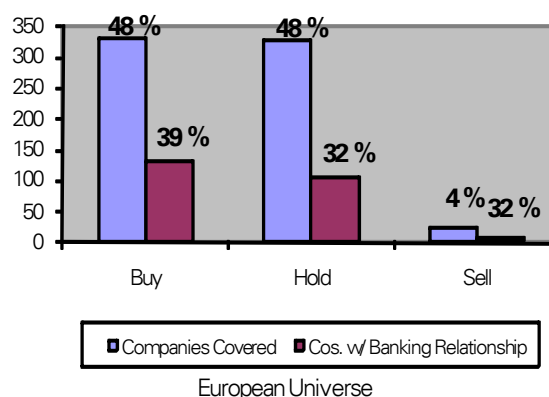
Buy: Based on a current 12-month view of total shareholder return (TSR = percentage change in share price from current price to projected target price plus projected dividend yield), we recommend that investors buy the stock.

Sell: Based on a current 12-month view of total shareholder return, we recommend that investors sell the stock

Hold: We take a neutral view on the stock 12-months out and, based on this time horizon, do not recommend either a Buy or Sell.

Notes:

- Newly issued research recommendations and target prices always supersede previously published research.
- Ratings definitions prior to 27 January, 2007 were:
 - Buy: Expected total return (including dividends) of 10% or more over a 12-month period
 - Hold: Expected total return (including dividends) between -10% and 10% over a 12-month period
 - Sell: Expected total return (including dividends) of -10% or worse over a 12-month period



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