

European Banks

Opportunities in the sector ahead of a stress test

With heightened debate over a stress test exercise in Europe, which regulators could publish by the end of the month, for illustrative purposes, we model a stress scenario for our universe of 36 listed European commercial banks, which include a stress test of higher credit losses consistent with a recession scenario, as well as an additional charge for "haircuts" on the banks' sovereign bond holdings. Our analysis does not include the unlisted banking sector.

Ultimately, the scope of the exercise, which at the European level is "orchestrated" by CEBS, is for regulators (but also market participants when published) to obtain reassurance that banks have sufficient capital buffers to withstand a stress; such a minimal "watermark" capital level has not been publicly defined but we assume that it is a core Equity Tier 1 ratio of 6%. In our view, the methodology used will be as relevant as the actual conclusions.

Based on our illustrative scenarios, we draw the following conclusions:

1) -Modeling a macro recession over the next 18 months, would increase LLP and erode earnings, but would not "tip the sector over the edge" as 25 banks out of 36 would pass the test. Our universe would "only" require €30bln of additional capital (Core ratio from 8.8% to 7.3%); concentrated in "only" 11 banks (largely based in Germany, Ireland, Greece), which however, in our view, have a capital shortfall of c. €15-20bln even before a stress test.

2) -We also flag that even under a recession scenario 10 European banks not only do not need further capital, but also still report a profit: among the large banks, these include SAN, Stan Chart, BBVA, DBNor, HSBC, BNP, Nordea and ISP.

3) -We add to our analysis also some scenarios of "haircuts" on the banks' sovereign bond holdings, which market participants have requested for some time, although regulators are still debating whether to include in the actual stress test. Having applied a haircut (of 6% on avg, with ranges from 5% to 30%) to the banks' sovereign bond portfolio, our modelling indicates that our universe of banks may need an additional €24bln of capital, bringing the total potential capital need to €54bln, spread over 21 banks. Note that to date, European banks have already received, and still can use as a buffer, €35bln in the form of government support, which at least goes some way towards providing a cushion, should the stress materialise.

4) -Putting a "stress capital need" into context highlights that the market has already largely discounted a stress scenario - Ultimately, even the €7bln capital requirement in our more comprehensive scenarios (of macro recession and sovereign haircut), represents c. 8% of our universe market cap, vs the c. 16% value "destruction" suffered by our universe in the last 3 months (admittedly partly due to liquidity issues). Trading on P/NAV of 1.0-1.5x even after NAV erosion and recapitalization, we find the sector valuation to be sufficiently discounted, but especially flag as attractive BNP, ISP, DBNor, Soc Gen, UCG and HSBC (1.9x P/NAV) based on a combination of attractive valuation, recent (in our view) 'unjustified' market performance and resilience to the stress test.

See page 18 for analyst certification and important disclosures, including non-US analyst disclosures.

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Banks

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Conclusion: outcome may be less negative than expected, at least for our universe

With heightened debate over a stress test exercise in Europe, which regulators could publish by the end of the month, for illustrative purposes, we model a stress scenario for our universe of 36 listed European commercial banks, which include higher credit losses consistent with a recession scenario for the next 18 months (not dissimilar to the exercise run in the US in 2009), as well as an additional charge for "haircuts" on the banks' sovereign bond holdings. The biggest limitation we face is that our analysis does not include the unlisted sector.

Ultimately, the scope of the exercise, which at a European level is "orchestrated" by CEBS, is for regulators (but also markets if/when the exercise is made public) to obtain reassurance that banks have sufficient capital buffer to withstand a stress, and to ensure that those banks that lack capital take the necessary steps to restore it. What minimal capital level should be under stress has not yet been defined and estimates have ranged from 4% to 8%, but also definition of capital remains unclear. In our analysis we assume that this is a core Equity Tier 1 ratio of 6%, although we acknowledge that estimates on the "minimal rate" has ranged from 4% to 8%, as well as on the type of capital considered.

Bearing in mind the new regulation included in the Basle III document, we prefer to use a moderate "watermark" ratio of 6% but apply it to a "clean" concept of capital, also bearing in mind that Basle III requires further deductions to such a capital base. These deductions are not included in our analysis given that regulators will likely delay more punitive changes especially if a recession or stress scenario materialize, in our view.

Our scenario, as detailed later, is consistent with a GDP contraction in the core European countries over the next 18 months (vs. 1.3% GDP growth we currently assume in our base case in Europe) and will result in NPLs doubling by 2011 with a ratio that would increase from 6.1% (end-09) to 12% by end-2011. On aggregate, we estimate this would result in c.€42bn of additional losses for the sector in the years 2010-11 on top of the €90bn we already forecast, to be partly absorbed by cumulative earnings of €143bn in 2010-11. LLPs would increase from the 320bps we currently forecast for 2010-11 to 580bps, or 290bps per year, which is twice 2009's level.

This would be painful, but would not "tip the sector over the edge", in our view, as 25 banks out of 36 would pass the test and maintain a Core Tier 1 ratio above 6%. On this basis, our universe would "only" require €30bn of additional capital (as the universe's Core ratio declines from 8.8% to 7.3%), but this is concentrated in "only" 11 banks (largely based in Germany, Ireland, Greece) which in our view have a capital shortfall of c. €15-20bn even before a stress test.

As mentioned in the previous page, we also flag that even under a recession scenario 11 European banks not only do not need further capital, they also still report a profit: among the large banks in our coverage universe, these include SAN, Stan Chart, BBVA, DBNor, HSBC, BNP, Nordea and ISP.

We add to our analysis also a scenario analysis of "haircuts" on the banks' sovereign bond holdings, which market participants, have requested for some time, although regulators are still debating whether to include in the actual stress test. We applied a haircut scenario to the government bond portfolio (using 6% on avg, with ranges from 5% to 30%, but we add further sensitivity in Table 10) and our modeling indicates that our universe of banks may need an additional €24bln of capital, bringing the total potential capital needs to €54bln, spread over 21 banks. Note that to date, European banks have already received, and still can use as buffer, €35bln in the form of government support, which at least goes some way towards providing a cushion, should the stress materialize.

Ultimately, banks which still reach minimal capital levels (whether under a stress scenario or even before a stress scenario) with the help of government hybrid of pref. shares in our view still have to look for options to repay the government and restore core equity over time, either through capital raising or through asset disposal plans. Our exercise ultimately indicates that, even under a stress, the largest capital needs remain concentrated in those banks/countries which already have substantial government support, as indicated in Table 2.

Based on our conclusions, we believe the publication of a stress test, if sufficiently comprehensive, could bring some relief to the sector

Putting a "stress capital need" into context highlights that the market has already largely discounted a stress scenario - Ultimately, even the €54bln capital requirement under our more comprehensive scenario (of macro recession and sovereign haircut), only represent c. 8% of our universe market cap, vs. the c. 16% value "destruction" suffered by our universe in the last 3 months (admittedly partly due to liquidity issues).

Trading on P/NAV of 1.6x even after NAV erosion and recapitalization we find the sector valuation to be sufficiently discounted.

In terms of individual names, we select banks which offer a combination of attractive valuation, recent "unjustified market performance, resilience to the stress test both in terms of capital and in terms of earnings, as indicated in the summary table below. Our preferred names on this basis include BNP, ISP, DBNor, Soc Gen, UCG and HSBC.

Note that our exercise does not cover the entire balance of the banks, and this can be a limitation for some banks with significant investment banking activities (such as for example Barclays) which may be exposed to other risks and stress tests. We have excluded banks with predominantly investment banking business from this analysis; for further discussion on Investment banks we refer to Kian Abouhossein's *Global Investment Banks: Market RWA consistency questioned: DB downgrade to UW, upgrade GS to OW* published 6 July 2010.

Table 1: European banks: stress test valuation summary

	Core T1 ratio after stress	P/NAV after erosion/recap	RoNAV stress	Perf 3m
Banks "above 6% threshold				
CASA	7%	1.5	-10%	-37%
SocGen	6%	1.1	-2%	-31%
UBI	6%	1.1	-9%	-29%
BARCLAYS	7%	1.0	-3%	-26%
MB	13%	1.0	2%	-24%
ISP	6%	1.4	1%	-24%
BNP	6%	1.5	4%	-24%
POP	7%	1.1	-14%	-23%
BES	6%	0.8	1%	-19%
UCG	7%	1.2	-6%	-19%
BBVA	6%	1.7	6%	-18%
Lloyds	6%	1.4	-17%	-15%
SAN	8%	2.1	12%	-13%
Danske	6%	1.3	-9%	-12%
Nordea	8%	1.7	2%	-11%
HSBC	9%	1.9	4%	-11%
RBS	6%	1.2	-20%	-10%
Stan	8%	2.4	11%	-10%
DNBnor	8%	1.2	6%	-6%
Swedbank	9%	1.5	-12%	-3%
Banks "below 6% threshold'				
BPM	5%	0.6	-2%	-27%
BTO	5%	1.4	-12%	-15%
BKT	5%	1.3	-3%	-20%
BP	5%	0.9	-13%	-14%
Erste	5%	2.4	-10%	-17%
PAS	5%	1.3	-33%	-7%
BOI	4%	0.8	-51%	-38%
BCP	4%	1.5	-15%	-27%
AIB	3%	0.8	-25%	-32%
MPS	3%	1.1	-6%	-18%
Alpha	2%	1.5	-35%	-41%
KBC	2%	2.1	7%	-16%
DPB	1%	1.9	-12%	-2%
NBG	-1%	3.4	-31%	-41%
CBK	-1%	1.8	-15%	-7%

Source: Company reports and J.P. Morgan estimates.

Table 2: European banks: JPMorgan's stress test

	NPL ratio 2009	Additional NPLs	Stress test NPL ratio	Additional LLP € mln	Stressed earnings	Core Tier ratio 2011 base case	Capital erosion	Stressed Core Tier 1	Capital need (6%)	Haircut to sovereign	Cor Tier 1 ratio 2011 Stress	Capital need (6%)	Govt support	Capital needs as % of mkt cap
UCG	4.7%	5.9%	10.6%	14,459	-3,159	8.7%	-1.5%	7.2%	0	-4,146	6.6%	0		0%
ISP	8.8%	5.8%	14.6%	9,211	442	7.7%	-0.9%	6.8%	0	-4,726	6.0%	84		0%
MB	3.7%	6.3%	10.0%	1,246	259	13.7%	-0.2%	13.5%	0	-800	12.5%	0		0%
MPS	10.7%	6.1%	16.8%	3,655	-1,003	5.3%	-1.5%	3.8%	2,860	-1,867	3.0%	3,924	1,900	65%
BP	6.1%	6.2%	12.3%	2,350	-997	7.0%	-1.7%	5.3%	577	-585	4.8%	942	1,450	34%
UBI	6.4%	5.9%	12.2%	2,411	-807	7.2%	-1.1%	6.1%	0	-418	5.9%	133		3%
BPM	2.3%	6.1%	8.4%	809	-125	6.2%	-0.8%	5.5%	197	-58	5.4%	229	500	15%
ITALY	6.7%	6.3%	13.0%	36,546	-5,617	8.0%	-1.2%	6.7%	3,635	-12,600	6.1%	5,312	3,850	6%
SAN	8.9%	1.6%	10.5%	13,215	8,872	9.3%	-0.8%	8.5%	0	-5,961	7.8%	0		0%
BBVA	8.2%	4.9%	13.1%	9,643	2,384	8.9%	-1.6%	7.2%	0	-3,540	6.4%	0		0%
POP	10.2%	7.9%	18.1%	3,674	-1,555	9.1%	-2.2%	6.8%	0	-488	6.5%	0		0%
BTO	7.0%	8.0%	15.0%	2,732	-884	8.4%	-2.2%	6.2%	0	-1,008	5.2%	556		12%
BKT	3.6%	4.2%	7.8%	776	-134	6.9%	-1.2%	5.8%	69	-381	4.9%	336		14%
PAS	9.9%	8.9%	18.8%	1,052	-676	8.6%	-4.0%	4.6%	266	0	4.6%	266		25%
SPAIN	6.7%	5.9%	12.6%	31,091	8,007	9.0%	-0.7%	8.3%	335	-11,378	7.0%	1,158	0	1%
SocGen	5.5%	5.9%	11.4%	10,335	-852	7.9%	-1.5%	6.4%	0	-3,736	5.7%	1,214		5%
BNP	5.3%	4.6%	9.8%	15,732	2,737	8.5%	-1.1%	7.4%	0	-14,659	5.9%	706		1%
CASA	4.3%	7.7%	12.0%	14,204	-2,514	9.6%	-1.8%	7.9%	0	-7,062	6.6%	0		0%
FRANCE	5.1%	5.5%	10.6%	38,365	548	8.6%	-1.2%	7.4%	0	-25,457	6.0%	1,920	0	2%
Danske	4.8%	5.2%	9.9%	4,734	-1,520	9.1%	-2.7%	6.4%	0	-213	6.3%	0		0%
DNBnor	2.6%	5.3%	7.9%	2,285	1,388	9.2%	-1.2%	8.0%	0	-168	7.9%	0		0%
Nordea	1.5%	5.0%	6.5%	5,402	694	9.7%	-1.2%	8.5%	0	-542	8.3%	0		0%
Swedbank	3.2%	6.6%	9.8%	3,616	-1,474	12.9%	-4.0%	8.9%	0	-17	8.9%	0		0%
NORDICS	3.0%	5.5%	8.5%	16,606	102	9.9%	-1.6%	8.3%	0	-941	7.8%	0	0	0%
BARCLAYS	5.6%	7.1%	12.7%	19,517	-2,200	9.6%	-1.9%	7.6%	0	-2,600	7.3%	0		0%
Lloyds	9.7%	6.7%	16.4%	21,641	-11,818	9.4%	-2.8%	6.5%	0	-1,558	6.3%	0		0%
RBS	8.7%	7.6%	16.3%	24,913	-18,468	9.3%	-2.7%	6.6%	0	-7,943	5.7%	2,037		4%
HSBC	4.2%	6.6%	10.9%	23,434	6,066	10.6%	-0.9%	9.7%	0	-13,160	8.7%	0		0%
Stan	2.2%	6.4%	8.6%	3,905	3,628	9.6%	-0.8%	8.8%	0	-1,219	8.3%	0		0%
UK	7.0%	6.8%	13.8%	86,074	-17,035	9.8%	-1.4%	8.4%	0	-26,480	7.3%	2,037	0	1%
AIB	6.2%	5.4%	11.6%	2,456	-2,037	7.0%	-3.1%	4.0%	1,388	-769	3.0%	2,041	3,500	173%
BOI	5.5%	4.7%	10.2%	2,528	-3,035	6.9%	-2.6%	4.3%	1,419	-266	4.0%	1,645	1,834	222%
IRELAND	5.9%	5.0%	10.9%	4,984	-5,073	6.9%	-2.8%	4.2%	2,807	-1,035	3.6%	3,687	5,334	192%
BCP	3.9%	5.0%	8.9%	1,716	-885	5.9%	-1.9%	4.0%	1,220	-409	3.5%	1,550		54%
	2.8%	3.1%	5.9%	446	-173	6.8%	-1.0%	5.8%	56	0	5.8%	56		4%
BES	2.7%	4.2%	6.9%	903	132	7.4%	-0.8%	6.6%	0	-374	6.2%	0		0%
PORTUGAL	3.3%	4.4%	7.7%	3,064	-929	6.7%	-1.2%	5.5%	1,276	-784	5.1%	1,606	0	20%
CBK	6.0%	4.7%	10.7%	6,585	-4,138	2.7%	-1.8%	0.9%	15,235	-5,806	-0.6%	19,590	16,400	284%
DPB	1.7%	4.6%	6.3%	2,066	-1,133	4.6%	-1.9%	2.8%	2,590	-1,767	1.2%	3,826		76%
GERMANY	5.0%	5.0%	10.1%	9,062	-5,456	3.2%	-1.9%	1.3%	17,825	-7,573	-0.2%	23,416	16,400	196%
NBG	5.4%	11.0%	16.4%	3,927	-1,971	9.5%	-4.1%	5.4%	474	-6,175	-1.1%	5,290	350	99%
Alpha	5.7%	10.9%	16.6%	2,635	-2,097	7.9%	-3.9%	4.0%	1,036	-1,468	1.9%	2,181	1,000	99%
GREECE	5.5%	10.9%	16.5%	6,562	-4,069	8.8%	-4.0%	4.8%	1,510	-7,643	0.1%	7,471	1,350	99%
Erste	6.6%	7.9%	14.5%	5,073	-948	8.1%	-2.6%	5.5%	711	-1,436	4.6%	1,828	1,200	19%
KBC	3.7%	6.7%	10.5%	5,093	1,047	6.9%	-2.4%	4.6%	1,926	-4,877	1.8%	5,677	7,000	55%
EUROPE	6.1%	6.0%	12.1%	241,748	-34,975	8.8%	-1.4%	7.3%	30,026	-100,203	6.2%	54,112	35,134	7%

Source: Company reports and J.P. Morgan estimate

Key issues we see with regard to the stress test, besides the actual final outcome

In our view, the methodology used for the stress test, when published by regulators, will be as relevant as the actual conclusions. We flag below what we believe are the main points to consider.

1) Breadth of coverage and inclusion of non-listed sector banks where appropriate, and disclosure by bank

The first issue regulators are currently facing is ensuring that the sample of banks included in the test is sufficiently large and extended to non-listed entities. For example we understand that last year's CEBS stress test only covered c. 20 European banks, which is a small sample of the European banking universe, and would not be deemed as sufficient.

In our scenario, we include a universe of 36 European banks with €9,000bn of total loans covering 50% of total banking assets in Europe, but we flag that we are still missing the unlisted banking sectors in Spain and Germany, which are currently particularly challenged and likely to face most of the problems.

2) Transparency in the risks run by the banks

Beyond the stress test itself, the market will likely benefit from some transparency in the risks of banks' balance sheet. Ultimately, as was the case in the initial phase of the structured credit crisis, lack of transparency undermined the market's confidence even more than when actual losses were disclosed.

Indeed, history appears to be repeating itself, and with regard to government bond holdings for example, banks seem to remain reluctant to provide disclosure. It is only now, nearly three months after the Greek crisis has unfolded, that several banks have started providing a geographical breakdown of their sovereign securities, and even this is far from complete.

3) Actual severity of the stress parameters, but also comparability by country should establish its credibility

While the debate continues, and it seems that the two points above are now being to an extent addressed, we remain concerned by the fact that parameters may not be sufficiently conservative, or indeed comparable when required (for example we understand that there may be discrepancies in the "haircut" assigned by banks of a different country to the sovereign exposure of a particular country), but we are also concerned that an excessively uniform approach may be implemented (ie a flat haircut for the sovereign exposure of all European countries).

As an example, at the end of June, the Austrian regulator OENB, published the results of the spring stress test, stressing the loan-portfolio on a potential GDP contraction of 360bps resulting in a slightly negative GDP for 2010-11 and in a NPL ratio increase of 6.7% to 11-12% levels, but not incorporating any kind of stress testing on the sovereign risks. This may be considered as an incomplete exercise,

But also at this stage we have no visibility on the assumptions that other countries are using.

4) Should the stress test use a “holistic approach” to banks’ risks?

With new regulation pending (although possibly somewhat delayed), in terms of new requirements not just for capital but also funding and liquidity, potential business break up, tax on the banks’ balance sheet, it is also relevant to ask whether a stress analysis on the sector should encompass not only a traditional deterioration on the asset side but the potential consequences deriving from a stress on the banks’ liability side (funding, liquidity) as well the impact of new taxes (with the latter representing the curious scenario of certain banks having to resort to government funding to pay the new taxes to the government).

It is not within the scope of this brief report to cover all these aspects, but we signal that our colleague Carla Antunes’ has written extensively on the subject and we refer to her report “*Global banks: too big to fail?*”, from February 2010, which collates all the various parts of new and proposed regulation presented with regard to the banking sector with a “holistic” approach and the result this could have on the financial situation of a universe of global banks.

5) What is the minimal capital level required under a “stress scenario” and whether there is consistency with at least some Basle III requirements

This is again another issue on which there is significant debate and little visibility, in our view.

In the stress test run by CEBS in the spring of last year, as well as in the stress test run by the US regulator, we understand that the capital “watermark” had been set using a Tier 1 level of 4%, which is consistent with the Basle II minimal capital requirement but is clearly superseded by new proposed regulation.

Again, if we refer to the only stress test published so far by the Austrian regulator (but also it seems that the debate is being conducted along similar lines), regulators are looking at a new Tier 1 level of 8% (indeed the Austrian regulator mentions that all banks passed it with flying colours, as the Tier 1 ratio remained above 8%), but ultimately this includes hybrid debt (which to an extent has been discredited by new regulation as a quality form of capital) as well as government participations which still will have to be replenished with real equity.

Ultimately, while government support provides a near term cushion to capital, we believe banks will have to replenish it with real equity over time, as is already the case in certain countries. Additionally, while the content of definition of “hybrid” (be that private or government) changes significantly from country to country and bank to bank, we may end up in the situation where a bank with a 10% Tier 1 ratio (but only a 3% core ratio) passes the test while a bank with a 7% core ratio (and no hybrid) fails, which seems a contradiction to us.

This also brings us to the next point which is, who will ultimately bear the cost if more capital is needed?

6) Who will pick up the tab and what is the ‘end game’?

Ultimately, two and half years after the banking crisis erupted, market confidence has still not been re-established, at least in Europe, not only because the clean up and

recapitalization process of the banking sector is far from completed, but also as some of the recapitalization/refinancing has been undertaken by governments, who are in turn facing financial challenges.

For the stress test to be successful, in our view, it needs to avoid creating another “circular reference” of weak banks being recapitalized by weak governments, and while the European Financial Stability Fund serves the purpose of providing funding to governments in difficulty, we are of the view that it still only provides a temporary solution, in the same way that government support to banks is only a temporary solution.

Ultimately, with parts of the European banking sector still relying on government support (this could increase to include more banks, especially in the non-listed sector) in our view the crucial point is not so much whether more government support is needed but what is the ultimate exit strategy and what is the amount of minimal additional “real equity” that would be needed, if a worst case scenario materializes and which banks are more likely to need it.

The framework we have used in our scenarios

In our analysis we have mainly covered the banks' potential losses deriving from a stress of their customer loan book and also provided some "haircut scenarios" for the government securities. We have not provided further valuation stress tests of their other securities portfolios, which could still suffer in a double dip.

As mentioned earlier, we have elected to compare the capital base resulting from the additional losses with a minimal "watermark" level of 6%, based on core Equity Tier 1 ratio. This is consistent with the new proposed Basle III methodology that has in fact "discredited" the use of hybrids and has brought the concept of capital closer to the concept of true shareholders' equity, but is by no means fully Basle III compliant, as this would require additional capital charges which in our view may likely be delayed if the sort of recession/stress scenarios we explore here actually materialise.

Note that in our exercise we have also excluded any form of government support if not in the form of traditional equity, as these instruments will in any case have to be repaid with real equity. We consider them, however, as they are, a near-term support while banks find fresh resources. Ultimately, in our view, we cannot get away from a recapitalization of the sector through private funds, as government support will ultimately be seen as temporary and could also potentially create a vicious stress circle as is already the case in certain countries.

The NPLs ratios (to be considered as additional NPLs creation in the next 18 months on top of what we already have in our 2010-2011 forecasts for the sector) we have elected to use are shown below, in addition to a comparison with those used for the the US stress test a year ago. The ranges depend largely on different geographies.

Table 3: Stress test parameters vs. US stress test, NPLs

	US		Europe JPM
	Baseline	More adverse	
Mortgages	5 - 6	7.0 - 8.5	3 - 10
Consumer	4 - 6	8.0 - 12.0	6 - 13
CRE	5 - 7.5	9.0 - 12.0	5 - 25
Corporate	3 - 4	5.0 - 8.0	4 - 11
Credit cards	12 -17	18.0 - 20.0	NA
Other loans	2 - 4	4.0 - 10.0	NA

Source: Company reports and J.P. Morgan estimates.

This brings our NPLs ratio to 12% for our universe (compared to 5.8% in our base case scenario for 2011E and the reported 6.1% at end-2009). On aggregate this assumes an NPLs increase of 6% over two years.

Assuming an average coverage of 43% (determined using the LGDs (loss given default) by product as indicated below), we calculate additional LLPs of €242bn for the sector over two years as indicated in Table 4. Note this is on top of the €90bn LLP we already forecast over the two years for our universe and would bring LLP from a total of c.320bp in 2010-11E in our forecasts to 580bp over the same period, ie 290bp per year, which is double the c. 140bp level reported in 2009, already considered a weak year.

This would result in €122bln or 190bp capital erosion, having used up all earnings and cancelled any dividend payment over the two years period, with the sector's core capital ratio declining from 8.8% to 7.3% for 2011. On aggregate, however, this seems a relatively positive result to us, particularly if we consider that 20 banks out of our 36-strong universe still retain a core ratio of at least 6% even under this stress.

Table 4: European banks: Impact on capital from stress test losses

	Additional LLP %	Additional LLP € mln	After tax impact	Cumulative earnings	Earnings after stress	Core Tier 1 ratio 2011 base case	Capital erosion	Core Tier 1 ratio 2011 Stress	Capital need if CT1 11E below 6%	Government support
UCG	2.43%	14,459	-10,168	7,009	-3,159	8.7%	-1.5%	7.2%	0	
ISP	2.36%	9,211	-6,131	6,573	442	7.7%	-0.9%	6.8%	0	
MB	3.47%	1,246	-840	1,099	259	13.7%	-0.2%	13.5%	0	
MPS	2.28%	3,655	-2,083	1,080	-1,003	5.3%	-1.5%	3.8%	2,860	1,900
BP	2.39%	2,350	-1,465	468	-997	7.0%	-1.7%	5.3%	577	1,450
UBI	2.40%	2,411	-1,367	560	-807	7.2%	-1.1%	6.1%	0	
BPM	2.40%	809	-445	321	-125	6.2%	-0.8%	5.5%	197	500
ITALY	2.59%	36,546	-22,726	17,109	-5,617	8.0%	-1.2%	6.7%	3,635	3,850
SAN	1.89%	13,215	-10,038	18,910	8,872	9.3%	-0.8%	8.5%	0	
BBVA	2.90%	9,643	-7,419	9,803	2,384	8.9%	-1.6%	7.2%	0	
POP	3.21%	3,674	-2,609	1,054	-1,555	9.1%	-2.2%	6.8%	0	
BTO	3.13%	2,732	-1,912	1,028	-884	8.4%	-2.2%	6.2%	0	
BKT	1.75%	776	-543	410	-134	6.9%	-1.2%	5.8%	69	
PAS	3.39%	1,052	-757	81	-676	8.6%	-4.0%	4.6%	266	
SPAIN	2.58%	31,091	-23,277	31,285	8,007	9.0%	-0.7%	8.3%	335	0
SocGen	2.73%	10,335	-7,553	6,701	-852	7.9%	-1.5%	6.4%	0	
BNP	2.23%	15,732	-10,956	13,693	2,737	8.5%	-1.1%	7.4%	0	
CASA	3.81%	14,204	-9,240	6,726	-2,514	9.6%	-1.8%	7.9%	0	
FRANCE	2.64%	38,365	-26,572	27,120	548	8.6%	-1.2%	7.4%	0	0
Danske	1.90%	4,734	-3,408	1,888	-1,520	9.1%	-2.7%	6.4%	0	
DNBnor	1.79%	2,285	-1,668	3,056	1,388	9.2%	-1.2%	8.0%	0	
Nordea*	1.89%	5,402	-4,073	4,767	694	9.7%	-1.2%	8.5%	0	
Swedbank	2.73%	3,616	-2,712	1,238	-1,474	12.9%	-4.0%	8.9%	0	
NORDICS	2.09%	16,606	-10,847	10,949	102	9.9%	-1.6%	8.3%	0	0
BARCLAYS	4.03%	19,517	-13,955	11,755	-2,200	9.6%	-1.9%	7.6%	0	
Lloyds	2.95%	21,641	-15,474	3,656	-11,818	9.4%	-2.8%	6.5%	0	
RBS	3.89%	24,913	-17,813	-655	-18,468	9.3%	-2.7%	6.6%	0	
HSBC	3.55%	23,434	-18,630	24,696	6,066	10.6%	-0.9%	9.7%	0	
Stan	2.71%	3,905	-2,788	6,416	3,628	9.6%	-0.8%	8.8%	0	
UK	3.23%	86,074	-62,903	45,868	-17,035	9.8%	-1.4%	8.4%	0	0
AIB	2.36%	2,456	-2,088	50	-2,037	7.0%	-3.1%	4.0%	1,388	3,500
BOI	2.06%	2,528	-2,149	-886	-3,035	6.9%	-2.6%	4.3%	1,419	1,834
IRELAND	2.20%	4,984	-4,237	-836	-5,073	6.9%	-2.8%	4.2%	2,807	5,334
BCP	2.22%	1,716	-1,381	497	-885	5.9%	-1.9%	4.0%	1,220	
BPI	1.45%	446	-365	192	-173	6.8%	-1.0%	5.8%	56	
BES	1.81%	903	-695	827	132	7.4%	-0.8%	6.6%	0	
PORTUGAL	1.94%	3,064	-2,445	1,516	-929	6.7%	-1.2%	5.5%	1,276	0
CBK	2.32%	8,369	-6,277	801	-5,476	2.7%	-2.3%	0.5%	15,235	16,400
DPB	1.95%	2,166	-1,516	313	-1,203	4.6%	-1.9%	2.7%	2,590	
GERMANY	1.92%	9,062	-6,570	1,114	-5,456	3.2%	-1.9%	1.3%	17,825	16,400
NBG	5.09%	3,927	-3,063	1,092	-1,971	9.5%	-4.1%	5.4%	474	350
Alpha	4.97%	2,635	-2,056	-42	-2,097	7.9%	-3.9%	4.0%	1,036	1,000
GREECE	5.04%	6,562	-5,119	1,050	-4,069	8.8%	-4.0%	4.8%	1,510	1,350
Erste	3.93%	5,073	-3,946	2,998	-948	8.1%	-2.6%	5.5%	711	1,200
KBC	3.02%	5,093	-3,916	4,963	1,047	6.9%	-2.4%	4.6%	1,926	7,000
EUROPE	2.71%	241,748	-178,633	143,658	-34,975	8.8%	-1.4%	7.3%	30,026	35,134

Source: Company reports and J.P. Morgan estimates.

Table 5: European banks: Stress test NPLs and corresponding losses 2009-2011

	PD						LGD						NPL 2009	NPL 2011	New NPLs 201-11	Stress test NPL JPM	Addition al LLPs
	Mortgage	Consumer	CRE	Corporate	Other DM	CEE/Latam	Mortgage	Consumer	CRE	Corporate	Other DM	CEE/Latam					
UCG	5.0%	7.0%	6.0%	5.6%	-	8.0%	30%	100%	20%	40%	-	50%	4.7%	5.1%	5.9%	10.6%	14,459
ISP	5.0%	7.0%	6.0%	5.5%		10.0%	30%	100%	20%	40%		50%	8.8%	10.4%	5.8%	14.6%	9,211
MB	5.0%	7.0%	6.0%	6.2%			30%	100%	20%	40%			3.7%	7.3%	6.3%	10.0%	1,246
MPS	5.0%	7.0%	6.0%	6.4%			30%	100%	20%	40%			10.7%	12.3%	6.1%	16.8%	3,655
BP	5.0%	7.0%	6.0%	6.4%			30%	100%	20%	40%			6.1%	6.6%	6.2%	12.3%	2,350
UBI	5.0%	7.0%	6.0%	6.0%			30%	100%	20%	40%			6.4%	7.6%	5.9%	12.2%	2,411
BPM	5.0%	7.0%	6.0%	6.4%			30%	100%	20%	40%			2.3%	3.1%	6.1%	8.4%	809
ITALY	5.0%	7.0%	6.0%	6.2%		10.0%	30%	100%	20%	40%		50%	6.7%	7.7%	6.3%	13.0%	36,546
SAN	3.0%	7.0%	25.0%	6.0%	2.0%	4.2%	25%	100%	50%	50%	42%	63%	5.7%	6.7%	4.8%	10.5%	13,215
BBVA	3.0%	7.0%	25.0%	6.0%	2.0%	3.0%	25%	100%	50%	50%	50%	56%	7.0%	7.7%	6.1%	13.1%	9,643
POP	4.0%	7.0%	25.0%	6.0%	3.0%		25%	100%	50%	50%			10.2%	11.5%	7.9%	18.1%	3,674
BTO	2.0%	6.0%	25.0%	5.0%			20%	100%	50%	50%			7.0%	8.8%	8.0%	15.0%	2,732
BKT	1.0%	6.0%	20.0%	5.0%			15%	100%	50%	50%			3.6%	4.6%	4.2%	7.8%	776
PAS	4.0%	7.0%	25.0%	6.0%			25%	100%	50%	50%			9.9%	11.7%	8.9%	18.8%	1,052
SPAIN	3%	7%	28%	6%	2%	4%	25%	100%	50%	50%	45.8%	59.7%	6.7%	7.5%	5.9%	12.6%	31,091
SocGen	4.0%	7.0%	6.0%	4.7%		12.0%	30%	100%	20%	40%		50%	5.5%	6.4%	5.9%	11.4%	10,335
BNP	4.0%	7.0%	6.0%	2.5%	5.2%	12.0%	30%	100%	20%	40%	50%	50%	5.3%	5.7%	4.6%	9.8%	15,732
CASA	4.3%	7.0%	6.0%	4.9%	42.8%	12.0%	30%	100%	20%	40%	50%	50%	4.3%	5.5%	7.7%	12.0%	14,204
FRANCE	4.0%	7.0%	6.0%	4.4%	5.0%	12.0%	30%	100%	20%	40%	50%	50%	5.1%	5.8%	5.5%	10.6%	38,365
Danske	4.0%	7.0%	6.0%	5.0%		14.0%	15%	100%	20%	40%		50%	4.8%	5.3%	5.2%	9.9%	4,734
DNBnor	4.0%	7.0%	6.0%	4.8%		14.0%	15%	100%	20%	40%		50%	2.6%	3.3%	5.3%	7.9%	2,285
Nordea*	4.0%	7.0%	6.0%	4.8%		8.0%	15%	100%	20%	40%		50%	1.5%	1.6%	5.0%	6.5%	5,402
Swedbank	4.0%	7.0%	6.0%	5.0%		14.0%	15%	100%	20%	40%		50%	3.2%	2.6%	6.6%	9.8%	3,616
NORDICS	4.0%	7.0%	6.0%	5.0%		14.0%	15%	100%	20%	40%		50%	3.0%	3.1%	5.5%	8.5%	16,606
BARCLAYS	4.0%	13.0%	8.0%	4.0%	8.0%	10.0%	30%	100%	50%	40%	60%	50%	5.6%	5.3%	7.1%	12.7%	19,517
Lloyds	6.0%	10.0%	10.0%	5.0%	6.0%	10.0%	30%	100%	50%	40%	50%	50%	9.7%	5.2%	6.7%	16.4%	21,641
RBS	4.0%	10.0%	10.0%	5.0%	8.0%	10.0%	30%	100%	50%	40%	50%	50%	8.7%	10.2%	7.6%	16.3%	24,913
HSBC	6.0%	12.0%	8.0%	4.0%	6.0%	10.0%	30%	100%	50%	40%	50%	50%	4.2%	3.2%	6.6%	10.9%	23,434
Stan	4.0%	12.0%	8.0%	4.0%	6.0%	10.0%	30%	100%	50%	40%	40%	50%	2.2%	1.5%	6.4%	8.6%	3,905
UK	6.0%	10.0%	8.0%	6.0%	6.0%	10.0%	30%	100%	35%	40%	50%	50%	7.0%	5.5%	6.8%	13.8%	86,074
AIB	3.0%	6.0%	10.0%	8.0%	3.0%	4.0%	30%	100%	30%	50%	50%	50%	6.2%	7.1%	5.4%	11.6%	2,456
BOI	3.0%	6.0%	10.0%	8.0%	3.0%		30%	100%	30%	50%	50%		5.5%	7.4%	4.7%	10.2%	2,528
IRELAND	3.0%	6.0%	10.0%	8.0%	3.0%	4.0%	30%	100%	30%	50%	50%	50%	5.9%	7.2%	5.0%	10.9%	4,984
BCP	2.5%	5.0%	10.0%	6.0%		5.0%	15%	100%	25%	50%	-	50%	3.9%	4.5%	5.0%	8.9%	1,716
BPI	1.5%	5.0%	10.0%	4.0%		4.0%	15%	100%	25%	50%	-	50%	2.8%	3.3%	3.1%	5.9%	446
BES	2.0%	5.0%	10.0%	4.0%		4.0%	15%	100%	25%	50%	-	50%	2.7%	3.5%	4.2%	6.9%	903
PORTUGAL	2.1%	5.0%	10.0%	4.9%	0.0%	4.6%	15%	100%	25%	50%	0%	50%	3.3%	3.0%	4.4%	7.7%	3,064
CBK	4.0%	6.0%	6.6%	5.2%		16.0%	40%	100%	29%	40%		50%	6.0%	7.8%	5.9%	12.0%	8,369
DPB	4.0%	6.0%	7.4%	5.1%			40%	100%	32%	40%			1.7%	3.9%	4.8%	6.5%	2,166
GERMANY	4.0%	6.0%	5.2%	4.6%		16.0%	40%	100%	20%	40%		50%	5.0%	6.8%	5.0%	10.1%	9,062
NBG	10.0%	10.0%	10.0%	11.0%		12.0%	30%	100%	35%	40%		50%	5.4%	8.8%	11.0%	16.4%	3,927
Alpha	10.0%	10.0%	10.0%	11.0%		12.0%	30%	100%	35%	40%		50%	5.7%	10.3%	10.9%	16.6%	2,635
GREECE	10.0%	10.0%	10.0%	11.0%	1.5%	12.0%	30%	100%	35%	40%	50%	50%	5.5%	9.4%	10.9%	16.5%	6,562
Erste	5.0%	9.0%	6.0%	6.0%	6.0%	10.0%	30%	100%	20%	40%	50%	50%	6.6%	6.8%	7.9%	14.5%	5,073
KBC	5.0%	9.0%	4.0%	6.0%	6.0%	10.0%	30%	100%	20%	40%	50%	50%	3.7%	3.4%	6.7%	10.5%	5,093
EUROPE	4.7%	8.0%	8.7%	5.6%	4.7%	9.6%	27%	100%	28%	42%	49%	52%	6.1%	5.8%	6.0%	12.1%	241,748

Source: Company reports and J.P. Morgan estimates.

Haircutting sovereign exposure would admittedly hurt more but is also more difficult to implement

With regard to sovereign bond holdings we have been confronted with the challenging task of devising a stress scenario that could be seen at the same time credible but also possibly politically acceptable. We think this is the biggest hurdle that the regulators are currently facing and indeed in the first stress test published (that of Austria) the issue does not appear to have been addressed, despite for example Erste's c.€18bn sovereign bond portfolio. Ultimately, better disclosure on geographical sovereign exposure would be beneficial as for some of the data below we have had to rely on estimates (eg. as is the case for the French banks).

Table 6: European banks: Government exposure

	Greece	Portugal	Italy	Spain	IRE	France	GER	UK	Other DM	Other EM	TOTAL	Total assets09	% of assets
UCG	993	32	31,500	555	66	0	8,600	0	3,440	5,160	50,346	928,760	5%
ISP	840	0	39,493	0	239	1,039	3,829	0	4,610	4,376	54,700	624,844	9%
MB	400	0	6,000	0	0	0	0	0	1,600	0	8,000	60,697	13%
MPS	20	0	18,327	0	0	0	0	0	562	0	18,909	224,815	8%
BP	86	0	5,208	155	0	0	0	0	299	0	5,748	135,707	4%
UBI	25	0	4,101	0	0	0	0	0	0	0	4,126	122,313	3%
BPM	10	3	516	9	0	0	0	0	29	0	567	44,281	1%
ITALY	2,374	35	105,146	719	305	1,039	12,429	0	10,540	9,536	142,397	2,141,418	7%
SAN	200	3,300	0	24,000	0	0	0	0	32,816	22,003	82,319	1,110,529	7%
BBVA	0	0	0	9,000	0	0	0	0	43,801	19,113	71,913	535,065	13%
POP	0	200	300	1,500	0	0	0	0	3,868	0	5,868	129,290	5%
BTO	0	0	0	6,000	0	0	0	0	2,152	0	8,152	122,301	7%
BKT	0	0	0	1,700	0	0	0	0	2,517	0	4,217	54,468	8%
PAS	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
SPAIN	200	3,500	300	42,200	0	0	0	0	85,154	41,116	172,470	1,983,977	9%
SocGen	3,000	2,000	3,000	3,000	2,000	11,000	0	0	18,723	17,000	59,723	1,023,701	6%
BNP	5,000	2,000	20,000	5,000	1,000	70,000	0	0	128,178	25,000	256,178	2,057,698	12%
CASA	850	3,000	7,000	3,000	1,000	60,000	0	0	39,145	10,000	123,995	1,557,300	8%
FRANCE	8,850	7,000	30,000	11,000	4,000	141,000	0	0	186,046	52,000	439,896	4,638,699	9%
Danske	3	2	388	133	553	0	48	1,412	501	170	18,421	415,903	4%
DNBnor	0	0	0	0	0	723	517	0	2,125	0	4,920	225,118	2%
Nordea	500	0	0	0	0	0	0	0	7,849	0	8,349	507,544	2%
Swedbank	15	3	0	4	0	0	0	0	218	1,687	9,489	186,171	5%
NORDICS	518	5	388	137	553	723	564	1,412	10,693	1,857	41,180	1,334,735	3%
BARCLAYS	1,500	500	0	5,000	0	0	0	16,500	9,500	0	33,000	1,668,504	2%
Lloyds	0	0	0	0	0	0	0	24,930	6,232	0	31,162	1,242,979	3%
RBS	1,500	1,500	0	0	0	0	0	27,322	116,535	0	146,857	1,842,202	8%
HSBC	1,500	0	0	0	0	0	0	25,160	229,034	0	255,694	1,891,562	14%
Stan	0	0	0	0	0	0	0	1,219	23,163	0	24,382	349,322	7%
UK	4,500	2,000	0	5,000	0	0	0	95,131	384,464	0	491,095	6,994,569	7%
AIB	0	0	0	0	3,900	0	0	1,627	5,948	0	11,475	174,314	7%
BOI	0	0	0	0	2,660	0	0	0	0	0	2,660	194,116	1%
IRELAND	0	0	0	0	6,560	0	0	1,627	5,948	0	14,135	368,430	4%
BCP	700	750	0	0	0	0	0	0	988	0	2,438	97,428	3%
BPI	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
BES	500	500	0	400	0	0	0	0	1,289	0	2,689	82,297	3%
PORTUGAL	1,200	1,250	0	400	0	0	0	0	2,277	0	5,127	227,181	2%
CBK	3,200	1,900	10,700	9,800	1,000	0	36,527	0	0	0	63,127	844,103	7%
DPB	1,560	90	0	1,330	0	0	21,620	0	0	0	24,600	226,609	11%
GERMANY	4,760	1,990	10,700	11,130	1,000	0	58,147	0	0	0	87,727	1,070,712	8%
NBG	19,500	0	0	0	0	0	0	0	6,500	0	26,000	113,394	23%
Alpha	4,200	0	0	0	0	0	0	0	4,162	0	8,362	69,596	12%
GREECE	23,700	0	0	0	0	0	0	0	10,662	0	34,362	182,990	19%
Erste	1,000	700	2,100	700	0	0	0	0	13,625	0	18,125	201,710	9%
KBC	1,900	400	7,800	2,700	600	0	0	0	54,842	3,718	74,360	352,773	21%
EUROPE	49,002	16,880	156,434	73,986	13,018	142,763	71,140	98,170	764,251	108,227	1,520,873	19,580,018	8%

Source: Company reports and J.P. Morgan estimates.

Table 7: European banks: Haircut to sovereign risks—capital impact, using a “base case” stress scenario

	Haircut to sovereign exposure	As a % of total	After tax impact	New Core Tier 1 capital	RWAs 2010	Cor Tier 1 ratio 2011 base case	Cor Tier 1 ratio 2011 Stress	Capital need if CT1 11E below 6%	Gov't money
UCG	-4,146	8%	-2,916	32,381	491,216	8.7%	6.6%	0	
ISP	-4,726	9%	-3,146	22,952	383,935	7.7%	6.0%	84	
MB	-800	10%	-539	6,738	53,950	13.7%	12.5%	0	
MPS	-1,867	10%	-1,064	3,798	128,706	5.3%	3.0%	3,924	1,900
BP	-585	10%	-364	3,936	81,296	7.0%	4.8%	942	1,450
UBI	-418	10%	-237	5,300	90,551	7.2%	5.9%	133	
BPM	-58	10%	-32	1,936	36,093	6.2%	5.4%	229	500
ITALY	-12,600	9%	-8,298	77,042	1,265,747	8.0%	6.1%	5,312	3,850
SAN	-5,961	7%	-4,528	48,274	621,002	9.3%	7.8%	0	
BBVA	-3,540	5%	-2,723	20,605	321,841	8.9%	6.4%	0	
POP	-488	8%	-347	6,052	93,582	9.1%	6.5%	0	
BTO	-1,008	12%	-705	3,470	67,111	8.4%	5.2%	556	
BKT	-381	9%	-267	1,533	31,150	6.9%	4.9%	336	
PAS	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
SPAIN	-11,378	7%	-8,570	80,804	1,153,606	9.0%	7.0%	1,158	0
SocGen	-3,736	6%	-2,731	22,529	395,721	7.9%	5.7%	1,214	
BNP	-14,659	6%	-10,208	41,059	696,077	8.5%	5.9%	706	
CASA	-7,062	6%	-4,594	24,065	363,799	9.6%	6.6%	0	
FRANCE	-25,457	6%	-17,533	87,653	1,455,597	8.6%	6.0%	1,920	0
Danske	-213	1%	-154	7,928	126,656	9.1%	6.3%	0	
DNBnor	-168	3%	-123	7,984	100,960	9.2%	7.9%	0	
Nordea	-542	6%	-409	16,035	192,754	9.7%	8.3%	0	
Swedbank	-17	0%	-12	6,028	67,694	12.9%	8.9%	0	
NORDICS	-941	2%	-698	37,975	488,064	9.9%	7.8%	0	0
BARCLAYS	-2,600	8%	-1,859	45,247	616,718	9.6%	7.3%	0	
Lloyds	-1,558	5%	-1,114	34,577	545,631	9.4%	6.3%	0	
RBS	-7,943	5%	-5,679	37,565	660,036	9.3%	5.7%	2,037	
HSBC	-13,160	5%	-10,462	89,959	1,030,590	10.6%	8.7%	0	
Stan	-1,219	5%	-870	16,681	199,924	9.6%	8.3%	0	
UK	-26,480	5%	-19,985	224,030	3,052,898	9.8%	7.3%	2,037	0
AIB	-769	7%	-653	2,061	68,368	7.0%	3.0%	2,041	3,500
BOI	-266	10%	-226	3,381	83,770	6.9%	4.0%	1,645	1,834
IRELAND	-1,035	7%	-880	5,442	152,138	6.9%	3.6%	3,687	5,334
BCP	-409	17%	-330	2,188	62,297	5.9%	3.5%	1,550	
BPI	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
BES	-374	14%	-288	4,280	69,185	7.4%	6.2%	0	
PORTUGAL	-784	15%	-618	8,192	161,161	6.7%	5.1%	1,606	0
CBK	-5,806	9%	-4,355	-3,114	274,600	2.7%	-1.1%	19,590	16,400
DPB	-1,767	7%	-1,237	853	77,994	4.6%	1.1%	3,826	
GERMANY	-7,573	9%	-5,591	-2,261	352,594	3.2%	-0.6%	23,416	16,400
NBG	-6,175	24%	-4,817	-831	74,316	9.5%	-1.1%	5,290	350
Alpha	-1,468	18%	-1,145	977	52,644	7.9%	1.9%	2,181	1,000
GREECE	-7,643	22%	-5,962	146	126,960	8.8%	0.1%	7,471	1,350
Erste	-1,436	8%	-1,117	6,134	132,712	8.1%	4.6%	1,828	1,200
KBC	-4,877	7%	-3,750	2,373	134,162	6.9%	1.8%	5,677	7,000
EUROPE	-100,203	7%	-73,002	527,530	8,475,639	8.8%	6.2%	54,112	35,134

Source: Company reports and J.P. Morgan estimates.

Table 8: European banks: Haircut to sovereign risks—capital impact, using a “base case” stress scenario

	Capital need if CT1 11E below 6%	Gov't money	Capital to raise	As a % of market cap	Market price (€)	Stressed NAV11E	Stressed NAVps	Current P/NAV 11e	Stressed P/NAV 11e	Current RoNAV 11e	Stressed RoNAV 11e
UCG	0		0	0%	1.80	28,409	1.47	0.83	1.22	11.8%	-5.6%
ISP	84		84	0%	2.10	19,591	1.53	0.93	1.38	12.8%	1.1%
MB	0		0	0%	6.01	5,862	6.11	0.80	0.98	9.5%	2.2%
MPS	3,924	1,900	3,924	65%	0.90	9,021	0.81	0.73	1.10	6.2%	-5.6%
BP	942	1,450	942	34%	4.33	3,947	4.60	0.57	0.94	6.6%	-12.6%
UBI	133		133	3%	7.10	4,370	6.64	0.78	1.07	5.7%	-9.2%
BPM	229	500	229	15%	3.34	3,007	5.75	0.47	0.58	6.0%	-2.1%
ITALY	5,312	3,850	5,312	6%		73,979	1.60	0.84	1.22	10.7%	-3.8%
SAN	0		0	0%	8.68	36,605	4.22	1.47	2.06	19.6%	12.1%
BBVA	0		0	0%	8.48	19,242	4.87	1.14	1.74	17.5%	6.2%
POP	0		0	0%	4.22	5,477	3.82	0.72	1.11	6.0%	-14.2%
BTO	556		556	12%	6.76	3,810	4.95	0.79	1.37	8.5%	-11.6%
BKT	336		336	14%	4.97	2,036	3.76	0.94	1.32	7.7%	-3.3%
PAS	266		266	25%	4.02	1,027	3.13	0.69	1.28	2.5%	-32.9%
SPAIN	1,158	0	1,158	1%		68,198	4.35	1.34	1.94	16.6%	5.9%
SocGen	1,214		1,214	5%	33.03	22,849	29.77	0.76	1.11	14.4%	-1.9%
BNP	706		706	1%	43.45	33,991	28.36	0.94	1.53	14.1%	4.0%
CASA	0		0	0%	8.16	12,683	5.39	0.72	1.51	14.9%	-9.9%
FRANCE	1,920	0	1,920	2%		70,699	16.37	0.85	1.42	14.4%	0.4%
Danske	0		0	0%	16.46	8,760	12.68	0.92	1.30	10.2%	-8.7%
DNBnor	0		0	0%	8.22	11,644	7.15	1.00	1.15	11.8%	6.0%
Nordea	0		0	0%	6.98	16,966	4.20	1.31	1.66	11.3%	2.0%
Swedbank	0		0	0%	7.64	5,995	5.17	1.02	1.48	10.4%	-12.3%
NORDICS	0	0	0	0%		44,379	5.90	1.13	1.46	11.0%	0.1%
BARCLAYS	0		0	0%	3.32	43,172	3.45	0.71	0.96	10.9%	-2.5%
Lloyds	0		0	0%	0.68	33,900	0.50	0.91	1.36	5.9%	-17.4%
RBS	2,037		2,037	4%	0.49	46,971	0.43	0.76	1.15	0.9%	-19.7%
HSBC	0		0	0%	7.37	69,080	3.81	1.36	1.93	15.2%	4.4%
Stan	0		0	0%	20.00	16,754	8.23	1.99	2.43	17.5%	10.8%
UK	2,037	0	2,037	1%		215,633	1.02	1.19	1.65	9.6%	-3.9%
AIB	2,041	3,500	2,041	173%	0.86	4,141	1.11	0.24	0.78	1.2%	-24.6%
BOI	1,645	1,834	1,645	222%	0.62	2,989	0.78	0.20	0.80	-3.5%	-50.8%
IRELAND	3,687	5,334	3,687	192%		7,129	0.94	0.23	0.79	-0.8%	-35.6%
BCP	1,550		1,550	54%	0.61	2,876	0.40	0.94	1.53	8.2%	-15.4%
BPI	56		56	4%	1.51	1,625	1.73	0.70	0.87	4.7%	-5.3%
BES	0		0	0%	3.27	4,998	4.28	0.64	0.76	7.7%	1.3%
PORTUGAL	1,606	0	1,606	20%		9,495	1.02	0.76	1.06	7.3%	-4.9%
CBK	19,590	16,400	19,590	284%	5.85	13,832	3.05	1.42	1.92	33.7%	-19.8%
DPB	3,826		3,826	76%	23.15	4,763	12.40	1.37	1.87	8.7%	-12.6%
GERMANY	23,416	16,400	23,416	196%		19,818	4.03	1.40	1.89	22.9%	-13.8%
NBG	5,290	350	5,290	99%	8.80	3,177	2.63	0.93	3.35	14.3%	-31.0%
Alpha	2,181	1,000	2,181	99%	4.13	2,980	2.80	0.55	1.47	2.2%	-35.2%
GREECE	7,471	1,350	7,471	99%		6,157	2.71	0.82	2.80	9.4%	-33.0%
Erste	1,828	1,200	1,828	19%	25.98	4,912	10.98	1.20	2.37	21.8%	-9.7%
KBC	5,677	7,000	5,677	55%	30.53	7,823	14.84	1.06	2.06	29.5%	6.7%
EUROPE	54,112	35,134	54,112	7%		522,149	1.69	1.12	1.63	12.0%	-3.3%

Source: Company reports and J.P. Morgan estimates.

We provide below a range of scenarios in our haircut sensitivity analysis, although in the body of our work we use our base case scenario. The capital requirement range using the three scenarios is provided in Table 10 below.

Table 9: Haircut levels to sovereign debt by country

	Optimistic scenario	Base case scenario	Pessimistic scenario
Greece	-25%	-30%	-35%
Portugal	-15%	-20%	-25%
Italy	-5%	-10%	-15%
Spain	-10%	-15%	-20%
Ireland	-5%	-10%	-15%
Hungary	-5%	-10%	-15%
France	0%	-5%	-10%
Germany	0%	-5%	-10%
UK	0%	-5%	-10%
Other DM	0%	-5%	-10%
Other EM	5%	0%	-5%

Source: Company reports and J.P. Morgan estimates.

Table 10: European banks Summary sensitivity to three "haircut scenarios"

	Sovereign exposure	Current	Optimistic scenario			P/NAV11 E new	Base case scenario				Pessimistic scenario			
		P/NAV 11e	Sovereign haircut	as a % of total	Capital needs		Sovereign haircut	as a % of total	Capital needs	P/NAV11E new	Sovereign haircut	as a % of total	Capital needs	P/NAV11 E new
UCG	50,346	0.83	-1,887	4%	0	1.15	-4,146	8%	0	1.22	-6,663	13%	0	1.30
ISP	54,700	0.93	-2,210	4%	0	1.27	-4,726	9%	84	1.38	-7,461	14%	1,904	1.47
MB	8,000	0.80	-400	5%	0	0.94	-800	10%	0	0.98	-1,200	15%	0	1.03
MPS	18,909	0.73	-921	5%	3,386	1.04	-1,867	10%	3,924	1.10	-2,812	15%	4,463	1.16
BP	5,748	0.57	-297	5%	763	0.90	-585	10%	942	0.94	-872	15%	1,121	0.99
UBI	4,126	0.78	-211	5%	16	1.04	-418	10%	133	1.07	-624	15%	250	1.10
BPM	567	0.47	-30	5%	214	0.58	-58	10%	229	0.58	-86	15%	245	0.59
ITALY	142,397	0.84	-5,957	4%	4,378	1.14	-12,600	9%	5,312	1.22	-19,720	14%	7,983	1.29
SAN	82,319	1.47	-2,945	4%	0	1.93	-5,961	7%	0	2.06	-10,077	12%	0	2.25
BBVA	71,913	1.14	-900	1%	0	1.58	-3,540	5%	0	1.74	-7,136	10%	1,472	1.95
POP	5,868	0.72	-195	3%	0	1.06	-488	8%	0	1.11	-782	13%	0	1.15
BTO	8,152	0.79	-600	7%	271	1.29	-1,008	12%	556	1.37	-1,415	17%	842	1.44
BKT	4,217	0.94	-170	4%	188	1.25	-381	9%	336	1.32	-592	14%	483	1.39
SPAIN	175,138	1.34	-4,983	3%	725	1.82	-11,378	7%	1,158	1.94	-20,441	12%	3,063	2.13
SocGen	59,723	0.76	-1,600	3%	0	1.04	-3,736	6%	1,214	1.11	-6,722	11%	3,396	1.21
BNP	256,178	0.94	-3,100	1%	0	1.24	-14,659	6%	706	1.53	-27,468	11%	9,626	1.79
CASA	123,995	0.72	-1,363	1%	0	1.17	-7,062	6%	0	1.51	-13,262	11%	1,796	2.01
FRANCE	439,896	0.85	-2,213	1%	0	1.18	-25,457	6%	1,920	1.42	-38,402	9%	14,818	1.69
Danske	18,421	0.92	-61	0%	0	1.28	-213	1%	0	1.30	-374	2%	0	1.32
DNBnor	4,920	1.00	0	0%	0	1.14	-168	3%	0	1.15	-337	7%	0	1.16
Nordea	8,349	1.31	-125	1%	0	1.63	-542	6%	0	1.66	-960	11%	0	1.69
Swedbank	9,489	1.02	-5	0%	0	1.48	-17	0%	0	1.48	-113	1%	0	1.50
NORDICS	41,180	1.13	-191	0%	0	1.44	-941	2%	0	1.46	-1,783	4%	0	1.48
BARCLAYS	33,000	0.71	-950	3%	0	0.94	-2,600	8%	0	0.96	-4,250	13%	0	0.99
Lloyds	31,162	0.91	0	0%	0	1.31	-1,558	5%	0	1.36	-3,116	10%	0	1.40
RBS	146,857	0.76	-600	0%	0	1.04	-7,943	5%	2,037	1.15	-15,286	10%	7,287	1.26
HSBC	255,694	1.36	-375	0%	0	1.68	-13,160	5%	0	1.93	-25,944	10%	0	2.26
Stan	24,382	1.99	0	0%	0	2.31	-1,219	5%	0	2.43	-2,438	10%	0	2.56
UK	491,095	1.19	-1,925	0%	0	1.50	-26,480	5%	2,037	1.65	-51,035	10%	7,287	1.84
AIB	11,475	0.24	-195	2%	1,554	0.66	-769	7%	2,041	0.78	-1,343	12%	2,529	0.90
BOI	2,660	0.20	-133	5%	1,532	0.76	-266	10%	1,645	0.80	-399	15%	1,758	0.84
IRELAND	14,135	0.23	-328	2%	3,086	0.70	-1,035	7%	3,687	0.79	-1,742	12%	4,287	0.87
BCP	2,438	0.94	-288	12%	1,452	1.50	-409	17%	1,550	1.53	-531	22%	1,648	1.57
BES	2,689	0.64	-240	9%	0	0.75	-374	14%	0	0.76	-509	19%	0	0.78
PORTUGAL	5,127	0.76	-528	10%	1,508	1.04	-784	15%	1,606	1.06	-1,040	20%	1,704	1.08
CBK	63,127	1.42	-2,650	4%	17,223	1.74	-5,806	9%	19,590	1.92	-8,963	14%	21,957	2.09
DPB	24,600	1.37	-537	2%	2,965	1.69	-1,767	7%	3,826	1.87	-2,997	12%	4,687	2.05
GERMANY	87,727	1.40	-3,187	4%	20,188	1.72	-7,573	9%	23,416	1.89	-11,959	14%	26,645	2.07
NBG	26,000	0.93	-4,875	19%	4,276	3.03	-6,175	24%	5,290	3.35	-7,475	29%	6,304	3.66
Alpha	8,362	0.55	-1,050	13%	1,855	1.36	-1,468	18%	2,181	1.47	-1,886	23%	2,507	1.58
GREECE	34,362	0.82	-5,925	17%	6,131	2.54	-7,643	22%	7,471	2.80	-9,361	27%	8,811	3.06
Erste	18,125	1.20	-530	3%	1,123	2.22	-1,436	8%	1,828	2.37	-2,342	13%	2,533	2.51
KBC	74,360	1.06	-1,345	2%	2,961	1.71	-4,877	7%	5,677	2.06	-8,595	12%	8,536	2.42
EUROPE	1,523,541	1.12	-27,110	2%	40,100	1.49	-100,203	7%	54,112	1.63	-166,420	11%	85,668	1.80

Source: Company reports and J.P. Morgan estimate

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07 July 2010

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Companies Recommended in This Report (all prices in this report as of market close on 06 July 2010)

BNP Paribas (BNPP.PA/€45.36/Overweight), DnB NOR (DNBNOR.OL/Nkr 65.40/Overweight), HSBC Holdings plc (0005.HK/HK\$71.65/Overweight), IntesaSanpaolo (ISP.MI/€2.18/Overweight), Société Générale (SOGN.PA/€35.10/Overweight), UniCredit (CRDI.MI/€1.85/Overweight)

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