Banco de Portugal
EUROSYSTEM

Results of the stress test exercise to Banco Espírito Santo and Santander Totta, SGPS

6 August 2010

Banco Espírito Santo and Santander Totta, SGPS asked Banco de Portugal to carry out stress tests to their sub-consolidated activity with the same approach as the exercise coordinated by the Committee of European Banking Supervisors (CEBS), in cooperation with the European Central Bank, published on 23 July 2010.

The exercise coordinated by the CEBS entailed those banking groups to be tested solely on the highest prudential consolidated level, taking into account that it is the appropriate one on supervisory grounds and also given that it avoids that the same set of institutions is covered in more than one consolidation level and/or jurisdiction. Under the CEBS framework, it was agreed that national supervisory authorities would be allowed to conduct and publish additional stress tests to institutions operating under their supervision with the methodology and the assumptions underlying the exercise coordinated by the CEBS (*vd* Annex) if their release would not occur before 6 August 2010.

It is in this context that the results of the two above-mentioned institutions are now published. It should be underlined that these results are not part of the exercise coordinated at the level of the European Union and thus will not be published by the CEBS.

Banco Espírito Santo

Actual results

At December 31, 2009	mln EUR
Total Tier 1 capital	5,405
Total regulatory capital	7,256
Total risk weighted assets	65,097
Pre-impairment income (including operating expenses)	1,364
Impairment losses on financial assets in the banking book	-612
1 yr Loss rate on Corporate exposures (%)[1]	1.34%
1 yr Loss rate on Retail exposures (%)[1]	0.10%
Tier 1 ratio (%)	8.3%

Outcomes of stress test scenarios

The stress test was carried out under a number of key common simplifying assumptions (e.g. constant balance sheet, uniform treatment of securitisation exposures). Therefore, the information relative to the benchmark scenarios is provided only for comparison purposes. Neither the benchmark scenario nor the adverse scenario should in any way be construed as a forecast.

Benchmark scenario at December 31, 2011[2]	mln EUR
Total Tier 1 capital after the benchmark scenario	6,033
Total regulatory capital after the benchmark scenario	7,885
Total risk weighted assets after the benchmark scenario	65,097
Tier 1 ratio (%) after the benchmark scenario	9.3%

Adverse scenario at December 31, 2011[2]	mln EUR
Total Tier 1 capital after the adverse scenario	5,204
Total regulatory capital after the adverse scenario	7,055
Total risk weighted assets after the adverse scenario	65,097
2 yr cumulative pre-impairment income after the adverse scenario (including operating expenses)[2]	2,945
2 yr cumulative impairment losses on financial assets in the banking book after the adverse scenario[2]	-2,470
2 yr cumulative losses on the trading book after the adverse scenario[2]	-453
2 yr Loss rate on Corporate exposures (%) after the adverse scenario[1, 2]	4.7%
2 yr Loss rate on Retail exposures (%) after the adverse scenario[1, 2]	0.3%
Tier 1 ratio (%) after the adverse scenario	8.0%

Additional sovereign shock on the adverse scenario at December 31, 2011	mln EUR
Additional impairment losses on the banking book after the sovereign shock[2]	-377
Additional losses on sovereign exposures in the trading book after the sovereign shock[2]	-143
2 yr Loss rate on Corporate exposures (%) after the adverse scenario and sovereign shock[1, 2, 3]	5.6%
2 yr Loss rate on Retail exposures (%) after the adverse scenario and sovereign shock[1, 2, 3]	0.4%
Tier 1 ratio (%) after the adverse scenario and sovereign shock	7.5%
Additional capital needed to reach a 6 % Tier 1 ratio under the adverse scenario + additional sovereign shock, at the end of 2011	-

1. Impairment losses as a % of corporate/retail exposures in AFS, HTM, and loans and receivables portfolios
2. Cumulative for 2010 and 2011
3. On the basis of losses estimated under both the adverse scenario and the additional sovereign shock

Banco Espírito Santo

Exposures to central and local governments in the European Economic Area

Banking group's exposure on a consolidated basis
Million EUR

Name of bank	Banco Espírito Santo
Reporting date	31 March 2010

	Gross exposures	of which Banking book	of which Trading book	**Net exposures**
Austria	0	0	0	0
Belgium	0	0	0	0
Bulgaria	0	0	0	0
Cyprus	0	0	0	0
Czech Republic	0	0	0	0
Denmark	0	0	0	0
Estonia	0	0	0	0
Finland	0	0	0	0
France	0	0	0	0
Germany	0	0	0	0
Greece	464	464	0	464
Hungary	0	0	0	0
Iceland	0	0	0	0
Ireland	0	0	0	0
Italy	0	0	0	0
Latvia	0	0	0	0
Liechtenstein	0	0	0	0
Lithuania	0	0	0	0
Luxembourg	0	0	0	0
Malta	0	0	0	0
Netherlands	0	0	0	0
Norway	0	0	0	0
Poland	3	0	3	3
Portugal	1,766	521	1,245	1,766
Romania	0	0	0	0
Slovakia	0	0	0	0
Slovenia	0	0	0	0
Spain	15	9	6	15
Sweden	0	0	0	0
United Kingdom	0	0	0	0

Santander Totta, SGPS

Actual results

At December 31, 2009	mln EUR
Total Tier 1 capital	2,632
Total regulatory capital	2,879
Total risk weighted assets	26,404
Pre-impairment income (including operating expenses)	726
Impairment losses on financial assets in the banking book	-101
1 yr Loss rate on Corporate exposures (%)[1]	0.12%
1 yr Loss rate on Retail exposures (%)[1]	0.37%
Tier 1 ratio (%)	10.0%

Outcomes of stress test scenarios

The stress test was carried out under a number of key common simplifying assumptions (e.g. constant balance sheet, uniform treatment of securitisation exposures). Therefore, the information relative to the benchmark scenarios is provided only for comparison purposes. Neither the benchmark scenario nor the adverse scenario should in any way be construed as a forecast.

Benchmark scenario at December 31, 2011[2]	mln EUR
Total Tier 1 capital after the benchmark scenario	3,412
Total regulatory capital after the benchmark scenario	3,659
Total risk weighted assets after the benchmark scenario	26,404
Tier 1 ratio (%) after the benchmark scenario	12.9%

Adverse scenario at December 31, 2011[2]	mln EUR
Total Tier 1 capital after the adverse scenario	3,402
Total regulatory capital after the adverse scenario	3,649
Total risk weighted assets after the adverse scenario	26,404
2 yr cumulative pre-impairment income after the adverse scenario (including operating expenses)[2]	2,034
2 yr cumulative impairment losses on financial assets in the banking book after the adverse scenario[2]	-277
2 yr cumulative losses on the trading book after the adverse scenario[2]	-200
2 yr Loss rate on Corporate exposures (%) after the adverse scenario[1, 2]	0.5%
2 yr Loss rate on Retail exposures (%) after the adverse scenario[1, 2]	1.1%
Tier 1 ratio (%) after the adverse scenario	12.9%

Additional sovereign shock on the adverse scenario at December 31, 2011	mln EUR
Additional impairment losses on the banking book after the sovereign shock[2]	-59
Additional losses on sovereign exposures in the trading book after the sovereign shock[2]	-8
2 yr Loss rate on Corporate exposures (%) after the adverse scenario and sovereign shock[1, 2, 3]	0.6%
2 yr Loss rate on Retail exposures (%) after the adverse scenario and sovereign shock[1, 2, 3]	1.4%
Tier 1 ratio (%) after the adverse scenario and sovereign shock	13.0%
Additional capital needed to reach a 6 % Tier 1 ratio under the adverse scenario + additional sovereign shock, at the end of 2011	-

1. Impairment losses as a % of corporate/retail exposures in AFS, HTM, and loans and receivables portfolios
2. Cumulative for 2010 and 2011
3. On the basis of losses estimated under both the adverse scenario and the additional sovereign shock

Santander Totta, SGPS

Exposures to central and local governments in the European Economic Area

Banking group's exposure on a consolidated basis
Million EUR

Name of bank	Santander Totta, SGPS
Reporting date	31 March 2010

	Gross exposures	of which Banking book	of which Trading book	**Net exposures**
Austria	0	0	0	0
Belgium	0	0	0	0
Bulgaria	0	0	0	0
Cyprus	0	0	0	0
Czech Republic	0	0	0	0
Denmark	0	0	0	0
Estonia	0	0	0	0
Finland	0	0	0	0
France	0	0	0	0
Germany	0	0	0	0
Greece	0	0	0	0
Hungary	0	0	0	0
Iceland	0	0	0	0
Ireland	0	0	0	0
Italy	0	0	0	0
Latvia	0	0	0	0
Liechtenstein	0	0	0	0
Lithuania	0	0	0	0
Luxembourg	0	0	0	0
Malta	0	0	0	0
Netherlands	0	0	0	0
Norway	0	0	0	0
Poland	0	0	0	0
Portugal	3,962	3,860	102	3,962
Romania	0	0	0	0
Slovakia	0	0	0	0
Slovenia	0	0	0	0
Spain	3,178	3,178	0	3,178
Sweden	0	0	0	0
United Kingdom	0	0	0	0

Annex

The scenarios underlying the stress test

The stress test exercise is rooted in two alternative macroeconomic scenarios: a benchmark scenario and an adverse scenario (Table 1). The scenarios for the Portuguese economy were developed by CEBS in close cooperation with the ECB and the European Commission.

In the benchmark scenario, the Portuguese economy is projected to decelerate throughout the whole horizon, growing only sluggishly in both 2010 and 2011. In the context of the fiscal consolidation process, coupled with an unavoidable deleveraging dynamics of the private sector, internal demand should contribute negatively to GDP growth. In turn, exports should contribute positively to GDP growth, following closely the external demand for the Portuguese economy.

The adverse scenario incorporates a set of common shocks to all economies, as well as some idiosyncratic shocks aiming to capture specific structural features of each economy. The adverse scenario corresponds to a particularly severe combination of shocks facing the Portuguese economy. In fact, this scenario entails the deepest and most protracted recessive period on record – and by a large margin. The economy would contract every year in the period 2009-2011, with the cumulated decline in GDP amounting to 5.3 percentage points, representing a cumulated difference of 3.3 percentage points vis-à-vis the benchmark scenario. Under the adverse scenario, unemployment would also rise to historical highs, reaching almost 13 per cent of the labour force.

Several additional assumptions are also worth highlighting. First, the adverse scenario envisages a drop in equity prices of 20 per cent in both 2010 and 2011 (amounting to a cumulated drop of 36 per cent in the full horizon).[1] Second, the adverse scenario also entails a decrease in residential and commercial property prices of 5 per cent in both 2010 and 2011. The calibration of this risk-factor was country-specific. Even though all evidence points to the non-existence of a house price overvaluation in Portugal, the nominal decline assumed in the adverse scenario may be justified by the very negative cyclical conditions prevailing in this scenario.[2]

In the context of an escalation of the market perception of sovereign risk, an additional sovereign shock was introduced in the adverse scenario, corresponding to an EU-specific shock to the yield-curve, modelled via country-specific shocks to the government bond rate spreads. For each country, this latter shock was calibrated by assuming that the country-specific spread would remain as high as seen after early-May 2010. The scenario does not envisage any sovereign default. The shocks are assumed to occur

[1] These shocks were applied on equity instruments in available for sale and trading portfolios, as well as on employees' pension funds equity portfolios.

[2] See "Box 6.1: Housing Prices in Portugal and Macroeconomic Fundamentals: Evidence of Quantile Regression", Financial Stability Report 2005, Banco de Portugal.

in 2010Q3 and persist over the projection horizon. Therefore, given the sharp upturn in 10-year interest rates throughout the horizon – corresponding to a rise of almost 3 p.p. in 2010 and a further 1.6 p.p. in 2011 – a conservative increase in the actuarial discount rate for the pension funds of banks' employees was also incorporated, amounting to 50 b.p. in both 2010 and 2011.

Table 1 – Macroeconomic Scenarios(*)

	Portugal	
Benchmark Scenario	2010	2011
GDP at constant prices (annual percent change (y-o-y))	0.5	0.2
Unemployment (as % of the labour force at year-end)	11.1	11.9
Short-term interest rate (3-month Euribor at year-end)	1.2	2.1
Long term interest rates (10-year Treasuries interest rates at year-end)	4.7	5.1
Commercial Property Prices (% change from previous year (y-o-y))	0.0	0.0
Residential Property Prices (% change from previous year (y-o-y))	0.0	0.0
Haircut on equity instruments in available for sale portfolios (%)[1]	10.0	10.0
Adverse Scenario	2010	2011
GDP at constant prices (annual percent change (y-o-y))	-0.3	-2.3
Unemployment (as % of the labour force at year-end)	11.3	12.8
Short-term interest rate (3-month Euribor at year-end)	2.1	3.3
Long term interest rates (10-year Treasuries interest rates at year-end)	5.2	5.8
Commercial Property Prices (% change from previous year (y-o-y))	-5.0	-5.0
Residential Property Prices (% change from previous year (y-o-y))	-5.0	-5.0
Haircut on equity instruments in available for sale portfolios (%)[1]	20.0	20.0
Additional Sovereign shock on the Adverse Scenario	2010	2011
Long term interest rates (5-year Treasuries interest rates at year-end)[2]	5.8	7.4

Notes: y-o-y: year on year change * The macroeconomic scenarios were developed by the CEBS in close cooperation with the ECB and the European Commission. (1) A shock of a similar magnitude was applied to equity trading portfolio and employees' pension funds equity portfolios. (2) Including the widening of spreads relative to German government debt.

Main assumptions regarding the projection of the institutions' financial positions

The impact of the macroeconomic scenarios on the financial standing of each of the institutions covered in the exercise requires projecting the profit and loss accounts and solvency positions in each case. Several assumptions underlying this exercise are worth underlining.

First, the projection was anchored in December 2009 accounting and solvency data. The data refers to the consolidation perimeter considered for supervisory purposes.

Second, the probabilities of default (PD) and loss given default (LGD) parameters are consistent with the benchmark and adverse scenarios, within a common methodology agreed for the purpose of the EU-wide stress test exercise. As expected, the adverse scenario entails a significant rise in loan losses throughout the horizon for the private sector, in particular for firms, reflecting, on the one hand, the decline in economic activity and the increase in unemployment and, on the other hand, the increase in interest rates.

Third, balance sheet items are assumed to be constant throughout 2010 and 2011 in both the benchmark and adverse scenarios.

Fourth, translating the main sources of risk into the institutions' financial statements required several additional assumptions:

- equity market risk was taken across the board in all portfolios and fully recognised in the profit and loss account;
- interest rate risk was taken into account through valuation changes in the fixed income instruments in the trading portfolio;
- The financial position of bank employees' defined-benefit pension funds were impacted by several risk factors, namely interest rate risk, equity prices and real estate prices. Any short-fall exceeding the so-called "accounting corridor" (10 percent of the highest of assets and liabilities of the fund) was recognised directly against Tier-1;
- net interest income was projected taking into account the transmission of interest rates on interest bearing assets and liabilities, multiplied by their respective average stock in the balance sheet;
- real estate prices implied the booking of impairments in the portfolio of real estate held not for own use (e.g., those received as a result of foreclosure or debtors' default);
- sovereign risk, albeit ruling out the default of European Economic Area sovereigns, was taken into account through securities in the trading book applying haircuts on the basis of the highest spreads posted by each EU country government debt vis-à-vis Germany since the 7 of May 2010. The impact on sovereign risk through available for sale portfolio was not considered given that, on the one hand, non-realised value changes of debt securities on this portfolio do not impact on regulatory own funds. On the other hand, impairments in the available for sale debt securities and loan exposures are booked only in case of default or near-default situations. Further, sovereign risk was also taken into account as sovereign spreads allowed stressing further private sector PD's and LGD's of each loan segment in each country on the basis of a model including, inter alia, long-term interest rates as an explanatory variable.