



*Banco de Portugal*  
EUROSYSTEM

## **EU-wide stress test: main results for the Portuguese banks**

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This note summarises the main features and results of the EU-wide stress testing exercise conducted by the European Banking Authority, in cooperation with the European Systemic Risk Board (ESRB) and National Supervisory Authorities. This EU-wide exercise aims at assessing the resilience of financial institutions to adverse market developments, as well as to contribute to the overall assessment of systemic risk in the EU financial system.

The stress tests were carried out using consistent methodologies, scenarios and key assumptions developed by the EBA in cooperation with the European Systemic Risk Board ESRB, the European Central Bank (ECB) and the EU Commission. The assumptions and methodology were established to assess banks' capital adequacy against a 5% Core Tier 1 capital benchmark. The adverse stress test scenario was set by the ECB and covers a two-year time horizon (2011-2012). The stress test has been carried out using a static balance sheet assumption as at December 2010. The stress test does not take into account future business strategies and management actions and is not a forecast of banks' results.

In the Portuguese case, the stress test exercise was conducted for the four largest banking groups, namely Caixa Geral de Depósitos, Banco Comercial Português, Espírito Santo Financial Group and Banco BPI, involving also the banks' employees pension funds. These banking groups accounted for almost two thirds of total assets of the Portuguese banking system in 2010. Note that Banco Santander Totta, which accounts for 8.5 percent of the banking system's total assets, was not included. Rather, it participated in the stress test exercise conducted by Banco de España as a subsidiary of Banco Santander, given that the EU-wide exercise entailed banking groups to be tested on the highest consolidated level. Therefore, overall, around 74 percent of the Portuguese banking system was covered in the exercise.

Following completion of the EU-wide stress test, the results determine that all four Portuguese banks meet the capital benchmark set out for the purpose of the stress test. However, two banks will devise, in agreement with Banco de Portugal, appropriate actions, such as increasing capital or putting in place asset disposals, to strengthen their balance sheets in the 3-month period immediately after the present publication.

The remainder of this note is organized as follows. First, the baseline and adverse scenarios underlying the exercise are briefly presented. The most important methodological assumptions underlying the transmission of these scenarios to the

financial statements of banks are then described. Finally, the main results of the stress test are presented, highlighting some common features across banking groups.

### **The scenarios underlying the stress test<sup>1</sup>**

The baseline scenario is mainly based on the Autumn 2010 European Commission forecast. It foresees a continuation of the economic recovery currently underway in the EU, a gradual increase in interest rates in the euro area and a depreciation of the dollar against the euro. However, while there is a recovery at the aggregate level, progress across Member States is uneven, with the recovery set to continue advancing at a relatively fast pace in some, but to lag behind in others. As such, in the baseline scenario, the Portuguese economy is projected to decelerate in 2011, recovering moderately in 2012 (Table 1). Notice that this scenario is based on Autumn 2010 forecasts and does not incorporate the Economic and Financial Assistance Program involving the International Monetary Fund (IMF), the European Union (EU) and the ECB.

The adverse scenario was developed by the ECB and is similar to those developed for the EU-wide stress tests in 2009 and 2010. It incorporates a set of common shocks to all economies, as well as some idiosyncratic shocks aiming at capturing specific structural features of each economy. The first key component of the scenario is an assumed aggravation of the ongoing EU sovereign debt crisis as of early 2011, adversely affecting a number of asset prices and accounting to some extent for country specific situations.

In the adverse scenario, several shocks were introduced in 2011. In particular, country-specific bond yield shocks have been introduced for the EU member states, house prices in most EU countries are assumed to be subject to permanent country-specific exogenous shocks, the short-term interbank rates increase by 125 basis points, and stock prices were assumed to fall by 15% on average in the euro area.

The adverse scenario corresponds to a particularly severe combination of shocks facing the Portuguese economy. This scenario entails a strong recessive period as the Portuguese economy would accumulate a decline in GDP amounting to 5.6 percentage points in the two-year period of the scenario (Table 1). Under the adverse scenario, unemployment would also rise to almost 13 per cent of the labour force.

The adverse scenario entails a decrease in residential and commercial property prices in both 2011 and 2012. 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.<sup>2</sup>

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<sup>1</sup> For more information on the EU wide stress test scenarios, methodologies and procedures, please go to <http://www.eba.europa.eu/EU-wide-stress-testing/2011/The-EBA-publishes-details-of-its-stress-test-scena.aspx>.

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

As mentioned, a sovereign shock was introduced in the adverse scenario leading to a sharp upturn in 10-year interest rates throughout the horizon. In turn, an increase in the actuarial discount rate for the pension funds of banks' employees was incorporated, amounting to 75 b.p. for the 2-year horizon.

The sovereign shock impacts on banks' balance sheets through three different ways: (i) through haircuts applied to the sovereign exposures included in the trading book, (ii) through increased provisions resulting from estimates of probabilities of default (PDs), implied from the rating of each country, and losses given default (LGDs) for exposures allocated to the banking book, and (iii) through the effects on the cost of funding.

**Table 1 – Macroeconomic Scenarios**

<b>Baseline Scenario</b>	<b>Portugal</b>	
	<b>2011</b>	<b>2012</b>
GDP at constant prices (annual percent change( y-o-y))	-1.0	0.8
Unemployment rate (as a % of the labour force at year-end)	11.1	11.2
Short-term interest rate (3-month euribor at year-end)	1.5	1.8
Long-term interest rates (10-year treasuries interest rate at year-end)	6.9	7.1
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
Actuarial discount rate (p.p. change from previous level)	0.0	0.0
<b>Adverse Scenario</b>	<b>2011</b>	<b>2012</b>
GDP at constant prices (annual percent change( y-o-y))	-3.0	-2.6
Unemployment rate (as a % of the labour force at year-end)	11.6	12.9
Short-term interest rate (3-month euribor at year-end)	2.8	3.1
Long-term interest rates (10-year treasuries interest rate at year-end)	9.4	9.6
Commercial Property prices (% change from previous year (y-o-y))	-10.0	-16.9
Residential Property Prices (% change from previous year (y-o-y))	-2.9	-8.4
Actuarial discount rate (p.p. change from previous level)	0.5	0.25

## **Methodological assumptions and procedures**

The stress test exercise assumed several additional assumptions, common to all banks participating in the exercise, which are worth highlighting:

- Static Balance sheet,

The exercise did not allow changes to the size and structure of balance sheet, meaning that banks could not react to the strong shocks envisaged in the scenario. In particular, the exercise does not impose a deleveraging process which Portuguese banks are currently implementing;

- Increase in the funding cost

Banks credit spreads increase in line with the increase in sovereign debt, with strong impacts in the funding cost. This hypothesis was assumed by all banks in the exercise, although it goes against the current situation of Portuguese banks which do not have access, in particular, to wholesale medium to long term debt markets;

- Limitations to the pass-through of the increase in the cost of funding to credit to customers

Banks could only pass-through to their credit to clients up to 50% of the increase in the cost of funding due to the increase in credit spread;

- Shocks on trading portfolio

Trading securities were subject to shocks on interest rates, equity prices, foreign exchange rates, commodity prices, etc. Moreover, haircuts on sovereign debt securities in the trading portfolio were also introduced (the haircuts were exacerbated later in the exercise);

- Increase in impairments on sovereign exposures

Although the scenario does not envisage any default of a EU sovereign, banks were required to report provisions on sovereign debt, as a result of the increase in default probabilities implied in the rating of each country. This instruction was introduced by EBA later in the exercise, as a response to the tensions that were being registered in the market.

The resilience of the banks is assessed against a benchmark defined with reference to capital of the highest quality (Core Tier 1). The capital benchmark has been set at 5% of risk weighted assets.

The results of all banks were scrutinised and challenged by the home country supervisor and within a peer review and quality assurance process, conducted by EBA staff and by a team of experts from national supervisory authorities, the European Central Bank (ECB) and the European Systemic Risk Board (ESRB). This process resulted in three rounds of submissions before the final approval of the results.

## **Stress test results and main conclusions**

Chart 1 presents the Core Tier 1 ratios in 2010 and in 2012 in the adverse scenario, for each bank. The figure highlights that in the adverse scenario the solvency position of all banking groups would deteriorate significantly. However, all Portuguese banking groups are able to withstand the particularly severe combination of economic and financial shocks embodied in the adverse scenario. In fact, albeit to different degrees, all banks continue to present Core Tier 1 ratios in excess of 5 per cent in 2012 in the adverse scenario<sup>3</sup>.

The deterioration of the solvency position in 2012 vis-à-vis 2010 can be traced back to the impact of the risk drivers of the exercise. First, in what concerns credit risk, net impairments in the loan portfolio rise significantly due inter alia to the prevalence of higher interest rates in conjunction with a sharp decline in GDP and higher unemployment rates. This has a direct weighing on profitability and solvency of all banks. However, there is some heterogeneity across banks due to differences in the initial value of loans portfolio and its composition.

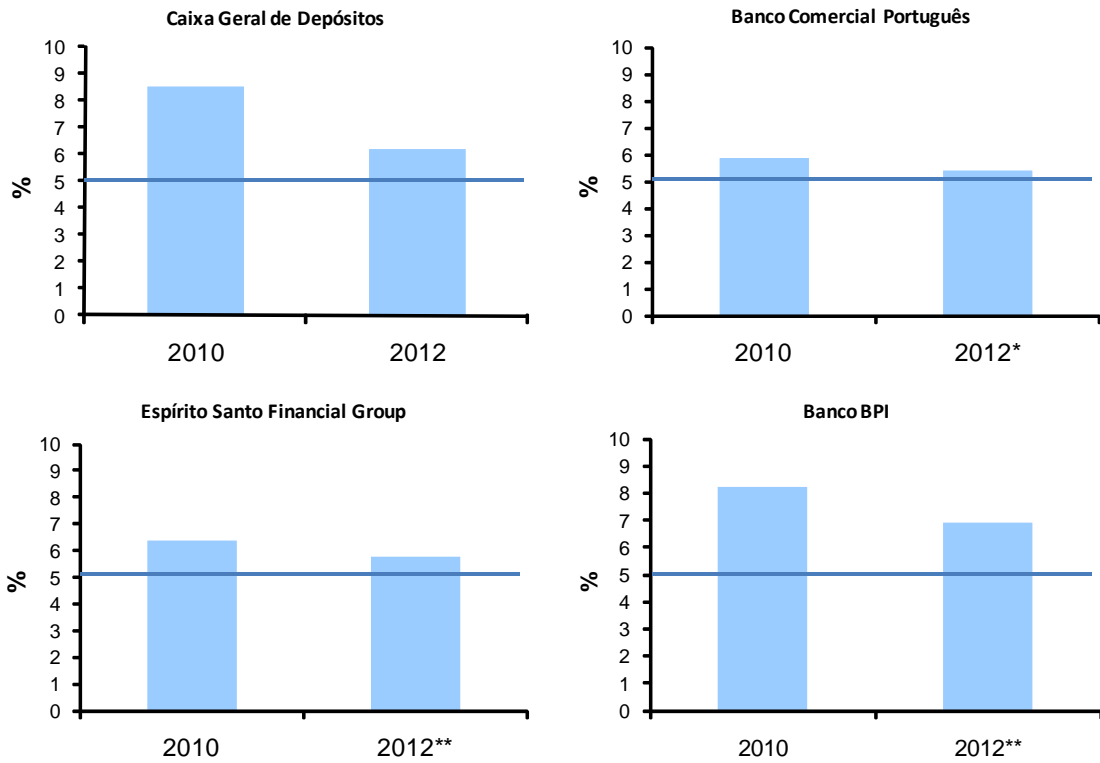
The exposure of the Portuguese banking system to sovereign risk is limited as the majority of sovereign debt is categorized in the banking book. The application of haircuts of similar magnitude to the ones considered in the trading book to sovereign exposures in the banking book would only impact own funds in the event of full realization of latent losses through the sale of these assets. However, as already mentioned, the exercise includes already an increase in provisions resulting from estimates of probabilities of default implied in the rating of each country. In addition, the significant rise in the cost of funding, due to the significant increase in the Portuguese sovereign credit spread, and the limitation to pass-through the increase in funding cost to customers, pressures down the net interest margin. Notwithstanding, all banks faced a cap on net interest margin to the 2010 value.

Overall, these results confirm that all Portuguese banks included in the exercise – and which represent the large majority of the system – are able to withstand a renewed severe materialization of risks at the global and national levels. However, the two banks with levels of capital between 5 and 6 per cent in 2012 in the adverse scenario, namely Banco Comercial Português and Espírito Santo Financial Group, will devise appropriate actions, such as a capital increase or asset disposals, to strengthen their balance sheets in the 3-month period immediately after the present publication.

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<sup>3</sup> The capital ratios incorporate the effects of measures announced, fully committed and executed up to 30 April 2011.

**Chart 1 – Core Tier 1 capital ratios**



\* It incorporates the effects of an equity issuance announced and fully committed between 31 December 2010 and 30 April 2011.

\*\* It incorporates the effects of measures announced, fully committed and executed up to 30 April 2011.