**28 September 2012**

# Bank recapitalisation and restructuring process

Results of the Independent Evaluation of the Spanish Banking Sector

## 1 Introduction

Today the results of the stress tests conducted on Spanish banks are being presented. This exercise enables an exhaustive and detailed estimation of the Spanish banking sector's capital needs at the level of each bank to be concluded. This process is part of the commitments assumed in July with the Eurogroup for the concession of the financial assistance for the restructuring and recapitalisation of the banking sector. These agreements are reflected in the Memorandum of Understanding (MoU).

The aim of this exercise has been to evaluate the resilience of the sector in the face of a very adverse and relatively unlikely macroeconomic scenario. It further provides for the dispelling of investors' doubts over the presence of losses not appropriately recognised in banks' credit portfolios. Accordingly, the exercise has pursued the following areas of work:

**1** An audit of the banks, performed by the main firms in the sector, in order to review the accounting valuation of the credit assets on bank balance sheets, including erroneous classifications of loans and refinancings. Una exhaustiva valoración de activos inmobiliarios basada en el trabajo de seis sociedades de valoración independientes.
**2** An exhaustive valuation of real estate assets based on the work of six independent appraisal companies.
**3** An in-depth analysis of each bank's business plans, and their adaptation to the scenarios in the exercise through conservative assumptions on credit growth and on deposits.
**4** A stress test under a highly conservative macroeconomic scenario conducted by the independent consultancy Oliver Wyman, which has lead-managed this process. The exercise includes an in-depth and granular analysis of the expected losses in bank portfolios and of the capacity to absorb such losses. When the bank integration processes under way are not considered, the result is a figure of additional capital needs of €59.3 billion (€55.9 billion after the tax effect) at the level of the overall system under the adverse scenario, essentially at banks that account for around 39% of the credit portfolio analysed. However, when the aforementioned integration processes are taken into account, this figure falls to €57.3 billion (€53.7 billion after the tax effect).

It should be stressed that these identified capital needs are not the final figure for State aid to banks. This aid might be significantly less, as it will be determined once the measures envisaged in the recapitalisation plans to be submitted by banks to the Banco de España in October have been taken into account. Consequently, the public aid required is certain to be far below the €100 billion credit line agreed with the Eurogroup on 9 June 2012.

The individual breakdown of these capital needs is given in the following table, bearing in mind the integration processes under way:

| Capital needs after the tax effect (€m) | | |
|---|---|---|
| | Baseline scenario €m | Adverse scenario €m |
| Grupo Santander | +19,181 | +25,297 |
| BBVA | +10,945 | +11,183 |
| Caixabank+Cívica | +9,421 | +5,720 |
| Kutxabank | +3,132 | +2,188 |
| Sabadell+CAM | +3,321 | +915 |
| Bankinter | +393 | +399 |
| Unicaja+CEISS | +1,300 | +128 |
| Ibercaja+Caja3+Liberbank | +492 | -2,108 |
| BMN | -368 | -2,208 |
| Popular | +677 | -3,223 |
| Banco de Valencia | -1,846 | -3,462 |
| NCG Banco | -3,966 | -7,176 |
| Catalunyabank | -6,488 | -10,825 |
| Bankia-BFA | -13,230 | -24,743 |
| Total System (only needs) | -25,898 | -53,745 |

When the integration processes are not taken into account, the breakdown of capital needs is as follows:

| **Capital needs after the tax effect (€m)** | | |
|---|---|---|
| | **Baseline scenario €m** | **Adverse scenario €m** |
| **Grupo Santander** | + 19,181 | + 25,297 |
| **BBVA** | + 10,945 | + 11,183 |
| **Caixabank+Cívica** | + 9,421 | + 5,720 |
| **Kutxabank** | + 3,132 | + 2,188 |
| **Sabadell+CAM** | +3,321 | +915 |
| **Bankinter** | +393 | +399 |
| **Unicaja** | +969 | +452 |
| **CEISS** | -1,269 | -2,063 |
| **Ibercaja** | +389 | -226 |
| **Liberbank** | +103 | -1,198 |
| **Caja3** | -188 | -779 |
| **BMN** | - 368 | - 2,208 |
| **Popular** | +677 | - 3,223 |
| **Banco de Valencia** | - 1,846 | - 3,462 |
| **NCG Banco** | - 3,966 | - 7,176 |
| **Catalunyabank** | - 6,488 | - 10,825 |
| **Bankia-BFA** | - 13,230 | - 24,743 |
| **Total Systema (only needs)** | -27,355 | -55,902 |

To ensure the transparency and proper implementation of this process, two expert committees were created, comprising representatives from the European Central Bank (ECB), the European Commission (CE), the European Banking Authority (EBA) and the International Monetary Fund (FMI).

Following the publication of these results, banks with capital needs will have to submit recapitalisation plans. Moreover, those banks that cannot see through their recapitalisation without public aid will, in turn, have to submit restructuring plans. These plans shall be approved before the end of November in the case of banks in which the FROB has a stake, and before the end of December for the rest. In addition, for banks receiving State aid, it is envisaged that they will be obliged to transfer part of their impaired assets to an independent Asset Management Company (AMC) and to include in their restructuring plans loss assumption exercises in respect of certain debt instruments.

The Spanish authorities are determined that this process should be completed with the utmost rigour, in keeping with the schedule agreed in the Memorandum of Understanding (MoU), and with the aim of achieving a more solvent, healthy and profitable Spanish banking system. These measures are intended to enhance credibility and transparency, and to break the vicious link between the banking system and sovereign debt. It is also expected hereby to promote the flow of credit to the economy and to boost economic growth.

## 2 Context

In the past three years the Spanish authorities have adopted a series of important measures in an attempt to correct the problems arising from the financial crisis and to restore confidence in the banking sector. These measures have been geared to supporting banks' liquidity, promoting the consolidation and restructuring of the more fragile institutions, and increasing capital and provisioning levels especially to cover risks arising from the real estate sector.

The measures, however, have not sufficed to ease market pressure. The markets have continued to have misgivings about the quality of the assets on bank balance sheets and about the level of banks' solvency. Accordingly, with a view to resolving doubts over Spanish banks' solvency and to determining the level of capital that ensures their long-term viability, the Council of Ministers, further to the Resolution of 11 May 2012, instructed the Ministry of Economy and Competitiveness to prepare an external aggregate (top-down) analysis **to evaluate the resilience of the Spanish banking sector in the face of an additional deterioration in the economy.**

The Banco de España, in coordination with the Ministry of Economy and Competitiveness, assumed the leadership of the exercise and hired independent international specialists for the analysis of potential capital needs under a highly stressed macroeconomic scenario (stress tests).

The 14 biggest Spanish banking groups (once the integration processes currently under way were taken into account) participated in this exercise, accounting for around 90% of the Spanish banking system's assets.

On 21 June, the independent consultancies hired, namely Roland Berger and Oliver Wyman, published their reports with the results of the exercise (based on a top-down methodology), considering two different macroeconomic scenarios: first, a so-called **baseline** scenario, which is considered the most likely to occur on the basis of estimates considered to be prudent, and second an **adverse** scenario, which assumes a further sharp deterioration in the Spanish macroeconomic situation. This latter scenario is considered very unlikely to occur (its statistical probability is around 1%) and envisages declines in GDP of 4.1%, 2.1% and 0.3% in 2012, 2013 and 2014, respectively.

The rationale for considering such an extreme scenario is to examine the resilience of the Spanish banking system, not only under normal conditions, but also in very adverse situations.

The aim of this first exercise, of an aggregate nature, was to give an overall capital figure for the whole of the Spanish banking system. The analysis was top-down, as the information used enabled a sufficiently precise estimate to be made for the whole of the banking system, but was not sufficiently granular to provide for individual bank estimates. As a result, this exercise gave rise to recapitalisation needs for the system of between €16 billion and €26 billion under the baseline scenario and of between €51 billion and €62 billion under the adverse scenario, for all the banks considered.

After the top-down exercise and in order to determine the capital needs for each bank, it was decided to conduct a bottom-up analysis which, as a natural extension of the first analysis, offered an individual and detailed study of bank portfolios and an exhaustive valuation of their assets. This second stage was entrusted to the consultancy Oliver Wyman. Also participating were the four main audit firms in Spain (Deloitte, PwC, Ernst & Young and KPMG) and a project manager (The Boston Consulting Group), commissioned with supporting the Banco de España in the coordination, homogenisation and successful outcome of all the work under way. This bottom-up analysis of capital needs has run from early July until today, with the presentation of its results.

In parallel with this second analysis stage (bottom-up) and with a view to properly recapitalising the Spanish banking system, the Spanish government, on 25 June 2012, requested external financial assistance in the context of the ongoing **restructuring and recapitalisation of its banking sector.** This financial assistance of up to €100 billion was agreed by the Eurogroup on 20 July 2012 and is included in the Memorandum of Understanding (MoU) agreed by the national and European authorities, as part of the programme of assistance mentioned above.

A key component of the programme is an overhaul of the vulnerable segments of the Spanish banking sector, which comprises the following three elements :

- Identification of individual bank capital needs through a comprehensive asset quality review of the banking sector and a bank-by-bank stress test, based on a highly stressed hypothetical macroeconomic scenario.
- Recapitalisation, restructuring and/or resolution of the least viable banks, based on plans to address any capital shortfalls identified in the stress test.
- Segregation of impaired assets in those banks receiving public support for their recapitalisation and their transfer to an external asset management company.

To date, and with the presentation of the results of the bottom-up exercise, the first of the above-mentioned points has been addressed, through a process involving close coordination between the Spanish and international authorities (ECB, the EC, the EBA and the IMF), and the support of the latter. The exhaustive nature of the exercise conducted should be highlighted, as it has entailed the work of more than 400 auditors in the review of more than 115,000 operations, and of six national and international appraisal companies performing more than 1.7 million house appraisals.

The other two objectives are under way, in accordance with the agreed schedule, and will take shape in the coming months as is explained later. The steps still to be taken will enable the State aid necessary to bring about the recapitalisation of the banking system to be identified.

Regarding the last of the elements of the programme, real estate developer - related assets of the participating banks that need State aid , will be transferred to an external Asset Management Company (AMC). So, the focus of AMC will be the real estate developer ("RED") – related exposures in the participating banks. Within this category, the following different asset classes can be encompassed: Real Estate Owned (REO), normal, sub-standard and doubtful loans to REDs, and RED Equity Positions. All these asset classes will have to meet specific eligibility criteria, the transfer price will be set conservatively and criteria for establishing the maximum size of the AMC will be determined. These and other details regarding the setting up of the AMC will be made public by mid-October.

Losses, if any, shall arise at the banks at the time of the segregation. The Spanish authorities, in consultation with the European Commission (EC), the European Central Bank (ECB) and the International Monetary Fund, have prepared a general plan and a legislative framework for the establishment of this asset-segregation mechanism. The Spanish authorities shall adopt the necessary legislation in autumn in order to ensure that the AMC is fully operational by November 2012.

The main activity of the AMC will be to manage the loan and real estate asset portfolio acquired from the participating banks within an agreed term of 15 years, with the aim of:

- Optimising recovery levels and maintaining the value of the assets as far as possible.
- Minimising the adverse impact on the Spanish economy, the real estate market and the banking sector.
- Managing the capital efficiently so as to lessen the cost of the clean-up as much as possible.

Finally, it should be recalled that Royal Decree-Law 24/2012, regulating the procedure and functions of the agencies involved in the preparation, approval and monitoring of credit institutions' restructuring and resolution plans, was approved on 31 August. This legislation complies with several of the commitments entered into by the Spanish government under the above-mentioned MoU.

Following the completion of all of the process described, in which the Banco de España has invested numerous human and technical resources to ensure coordination and homogenisation, a more solvent, healthy and profitable Spanish banking system shall be achieved.

## 3 Roadmap for bank recapitalisation and restructuring

### 3.1 General approach

The MoU specifies that the estimation of capital needs (published today) is an essential element of the roadmap established for the recapitalisation and restructuring of the Spanish banking system. The steps that must be taken next are as follows:

- Formulation of recapitalisation plans for banks with a capital shortfall vis-à-vis the minimum level established in the stress test.
- Review of these plans by the authorities and classification of banks, following the MoU terminology, into Group 2 (banks that will require public support) and Group 3 (banks that will have until 30 June 2013 to implement their recapitalisation plan and to meet the capital needs established without requiring State aid thereafter). Group 2 banks must also submit a restructuring/resolution plan which will be evaluated by the Banco de España and sent to the European Commission for its approval.
- Transfer of the troubled assets of the banks that require State aid to the Asset Management Company for Assets Arising from Bank Restructuring (AMC) envisaged for these purposes in the recent Royal Decree-Law 24/2012 of 31 August 2012.
- Provision of State aid to banks.

Mindful of the foregoing, it is important to point out that the estimated capital needs specified in the report of Oliver Wyman for various Spanish banks, will not generally coincide with the amount of State aid required to recapitalise the banks. The difference between the capital needs identified in the stress test and the eventual State aid will depend on the various actions that the banks incorporate into their recapitalisation plans, which may be summarised as follows:

- Disposal of assets and businesses on the market.
- Raising capital that can be obtained privately on the markets.
- Transfer of assets to the AMC.
- Implementation of burden-sharing exercises (voluntarily or imposed by the authorities), involving the assumption of losses by the holders of hybrid and subordinated instruments, within the framework of Royal Decree-Law 24/2012.

### 3.2 Details

On the basis of the stress test results presented today and the recapitalisation plans to be submitted in the coming weeks by those banking groups which have been identified in the stress test as having capital needs, banks will be classified into four Groups:

- **Group 0** is made up of those banks for which no capital shortfall is identified and no further action is required. According to the results released today, these Banks are seven (in order of amount of total assets): Santander, BBVA, Caixabank, Banco Sabadell, Kutxabank, Unicaja (considering the business combination with CEISS) and Bankinter..
- **Group 1** is composed of those banks in which the Fund for the Orderly Restructuring of the Banking Sector (FROB) already has a capital holding (BFA/Bankia, Catalunya Caixa, NCG Banco) and Banco de Valencia;
- **Group 2** will include banks with capital shortfalls identified by the stress test and unable to meet those capital shortfalls privately without having recourse to State aid. The members of this group will be determined when the recapitalisation plans submitted by the banks in October have been analysed.
- **Group 3** will be made up of those banks with capital shortfalls identified by the stress test, with credible recapitalisation plans and able to meet those capital shortfalls privately without recourse to State aid. As in the previous case, the eventual members of this group will be determined following the analysis of the relevant recapitalisation plans.

Regarding **Group 1** banks, the Spanish authorities have been working on the restructuring or resolution plans, in conjunction with the European Commission, since end-July 2012. These plans will be finalised in light of the stress test results and will be submitted in time for the Commission to approve them in November 2012. On this basis, State aid will be granted and the envisaged plans can be implemented immediately. The process of moving impaired assets to the AMC will be started by year-end. Also, voluntary or mandatory loss assumption exercises will be required of hybrid capital holders for Group 1 banks (in general, for all banks requiring public support).

Regarding **Group 2** banks, the Spanish authorities and the European Commission will evaluate their viability on the basis of the stress test results and the recapitalisation plans submitted:

- Viable banks which require public support for their recapitalisation and banks that cannot be resolved without serious harmful effects on the banking system must draw up a **restructuring plan.**
- Banks that are considered non-viable and non-systemic shall be resolved in an orderly manner in accordance with the terms of the relevant **resolution plan**

The Spanish authorities will have to submit a restructuring or resolution plan to the European Commission in October 2012 at the latest. Given the need to incorporate the stress test results, the approval process will foreseeably extend up to the end of December, when these banks will be restructured or resolved in an orderly manner. All Group 2 banks must include in their restructuring or resolution plan the necessary steps to segregate their impaired assets into the AMC and the voluntary or mandatory exercises for the assumption of losses by the holders of hybrid capital instruments.

The Banco de España and the European Commission will be responsible, upon a prior report from the FROB, for approving the resolution and/or restructuring plans submitted. The FROB will submit to the Ministry of Economic Affairs and Competitiveness and the Ministry of Financial Affairs and Public Administration an economic report with details of the financial impact which the plans submitted will have on the funds provided with a charge to the State budget.

Public support will be granted, if appropriate, to Group 1 and 2 banks as soon as the Commission approves the related plans, following the procedure agreed in the Financial Assistance Facility Agreement. Thus, after funds have been requested for each bank, the European Financial Stability Facility (EFSF) – or, once it becomes operational, the European Stability Mechanism (ESM) – will verify compliance with all the requirements for disbursement and will forward its proposal in this respect to the Euro Working Group for approval. This proposal will take into account the specific national factors needed for consent to be given by each Member State. The Commission has to review compliance with the conditionality agreed in the MoU and issue a report which will be taken into consideration by the EFSF for these purposes. This review will take place in the second half of October. Once the operation has been approved, the EFSF/ESM will transfer to the FROB the related funds for the FROB to inject them into the specific bank in exchange for those securities (ordinary shares or convertible bonds) that may be decided.

Regarding **Group 3** banks, two cases are distinguished:

- The **Group 3** banks planning a **significant capital increase** equal to 2% or more of risk-weighted assets will, as a precautionary measure, be required to issue contingent convertible securities (COCOs) under the recapitalisation scheme to meet their capital needs by end December 2012 at the latest. The COCOs will be subscribed by the FROB using programme resources and can be redeemed until 30 June 2013 if the banks succeed in raising the necessary capital from private sources. Otherwise they will be recapitalised through the total or partial conversion of the COCOs into ordinary shares. Te banks will have to present restructuring plans.

- The **Group 3** banks planning a **more limited capital increase** of less than 2% of risk-weighted assets will have until 30 June 2013 to carry it out. Should they not succeed, they will be recapitalised by means of State aid and will have to present restructuring plans.

The Group 3 banks that still benefit from public support under this programme on 30 June 2013 will be required to envisage in their restructuring plans the transfer of their impaired assets to the AMC and voluntary or mandatory exercises for the assumption of losses by the holders of hybrid capital instruments, unless it can be shown, for banks requiring less than 2% of risk-weighted assets in State aid, that other means to achieve full off-balance sheet segregation are less costly.

The Banco de España and the European Commission, in cooperation with the ECB, will closely monitor implementation of the recapitalisation plans, while the European Commission will monitor application of the restructuring decisions. In putting their recapitalisation into practice, banks requiring State aid will have to separate unimpaired assets from impaired assets before removing the latter from the balance sheet.

For this purpose, an AMC will be set up to acquire impaired assets at their real economic value, and the AMC's perimeter (assets to be transferred) and the transfer prices will be approved. The transfer of assets to an AMC will be obligatory for banks receiving State aid. In the case of banks already wholly or partly owned by the FROB, measures will be adopted to accelerate the restructuring process to the extent possible. The regulations governing the AMC and service agreements with the assignor banks and third parties are expected to be approved in November. The AMC is expected to be fully operational by the beginning of December.

The next steps in the roadmap for bank recapitalisation and restructuring are set out in the following table:

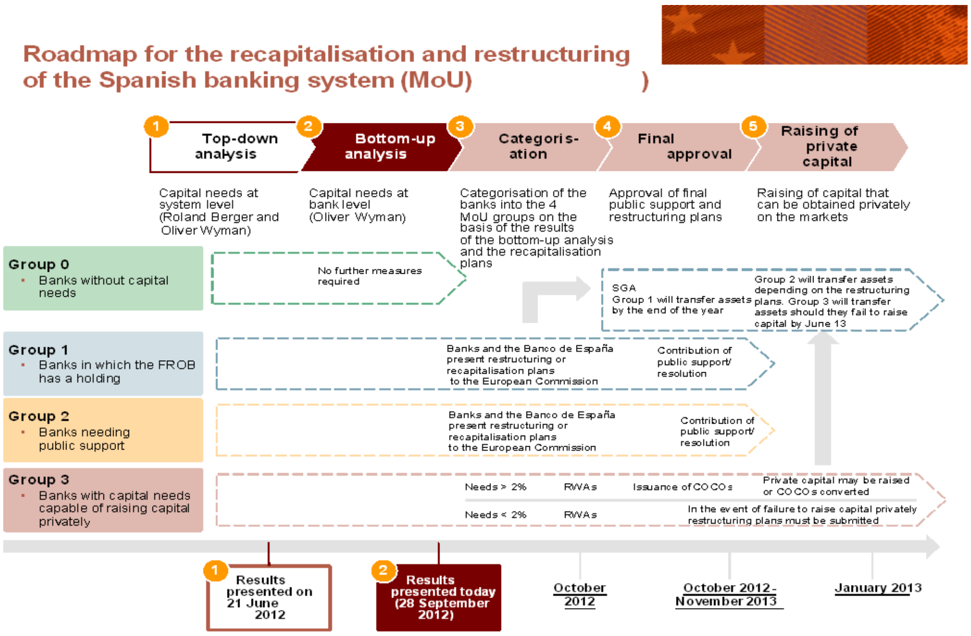


**Figure 1: Roadmap for the recapitalisation and restructuring of the Spanish banking system (MoU)**

## 4 Programme for independent evaluation of the Spanish banking sector

The results of the bottom-up analysis determine capital needs under two scenarios (baseline and adverse) for each of the 14 Spanish banking groups, as defined in the MoU. The main objective has been to evaluate the sector's capacity to withstand a highly adverse macroeconomic scenario, identifying the amount of capital necessary for banks to maintain a (core Tier 1) capital ratio, as defined by the EBA (European Banking Authority) and adopted by Royal Decree-Law 24/2012 of 31 August 2012, of 6% under the adverse scenario and of 9% under the baseline scenario, levels that are more demanding than those adopted in other stress tests conducted previously in the European Union.

**The main characteristics of the Independent Evaluation of the Spanish banking sector programme are**

- Performance of an independent evaluation of the health and resilience of the Spanish banking sector.

- Centred on:
  - An accounting valuation of credit portfolios as at 31/12/2011 carried out by four audit firms
  - A review of the valuation of real-estate assets (securing loan transactions and foreclosed), made by six national and international valuation companies.
  - A forward-looking economic valuation, based on analysis of macroeconomic scenarios, specific risk parameters for each segment of the portfolio at each bank and the projection of the loss-absorbing capacity of income statements. All this with the object of determining additional capital needs under very unfavourable and unlikely macroeconomic scenarios.

- With the objective of:
  - Giving confidence regarding the capacity of the sector to withstand highly adverse scenarios, and identifying possible capital gaps to be covered to ensure the solvency and viability of the system in the event that the unlikely circumstances described in the scenario parameters actually occur.

- Providing transparency to all interested parties (International authorities, market analysts, investors, etc.) on the levels of risk, mainly in the real-estate development segment, and of capital needs under an extremely severe macroeconomic scenario

To ensure that the work would be carried out to the highest possible quality and that a single methodology would be applied consistently and uniformly to all participating groups, a system of governance was established to supervise the work, in which were represented, in addition to the Spanish authorities (Banco de España, Ministry of Economic Affairs and Competitiveness and Fund for the Orderly Restructuring of the Banking Sector), the European Commission (EC), the European Central Bank (ECB), the European Banking Authority (EBA) and the International Monetary Fund (IMF). The governance structure is two-tier, with all the authorities involved being represented at both levels:

- Expert Coordination Committee (ECC). In all, seven meetings of the ECC have been held (on a fortnightly basis) at which the state of the process has been analysed in detail, supporting documentation has been reviewed, explanations on the implementation of the various intermediate work areas received and the main hypotheses that have enabled it to be consistent and credible and completed within the timetable established in the MoU decided..
- Strategic Coordination Committee (SCC). The SCC has been briefed on a fortnightly basis by the ECC, regular meetings having been held. This committee has been responsible for taking the strategic decisions necessary for the exercise to be successfully concluded, eventually approving its final results.

The structure defined reflects the commitment of the international and Spanish authorities to the process of recapitalisation and restructuring of the Spanish banking system.

To recapitulate, the work was carried out in four **major areas:**

**Work Area 1: evaluation of additional capital needs according to the top-down analysis**

In Work Area 1, the independent consultants hired for the purpose, Roland Berger and Oliver Wyman, made a first estimate of the additional capital needs of the Spanish banking system as a whole in two different macroeconomic settings: one, known as "baseline", considered to be the most likely, and another, known as "adverse", with a probability of occurring of less than 1%, in which it was assumed that there would be a sharp additional deterioration in the Spanish macroeconomic situation.

The macroeconomic scenarios and the minimum capital (core Tier 1 reference) ratios required in the different scenarios were set by the international authorities in consultation with the Spanish authorities (European Commission, ECB, EBA, IMF, Ministry of Economic Affairs and Competitiveness, Banco de España, and FROB). The details of the scenarios are set out in Annex I to this document and in Oliver Wyman's detailed report.
The results, published on 21 June 2012, were:

- Considering the baseline macroeconomic scenario and a core Tier 1 requirement of 9%, the additional capital needs (on top of those as at 31 December 2011, the reference date of the exercise) of the Spanish banking system as a whole are calculated at between €16 and €26 billion.
- Considering the adverse macroeconomic scenario and a core Tier 1 requirement of 6%, the additional capital needs (on top of those as at 31 December 2011, the reference date of the exercise) of the Spanish banking system as a whole are calculated at between €51 and €62 billion.

**Work Area 2: accounting review of the loan portfolio and of foreclosed assets or assets received in payment of debts**

The objective of this Work Area has been to undertake a detailed and itemised analysis based on population and sample analyses of the loan portfolios of the 14 banking groups included in the scope of the independent evaluation.

This work has been undertaken by the four largest audit firms in Spain (Deloitte, PwC, Ernst & Young and KPMG). The 14 banking groups included in the exercise were assigned to each audit firm, and none of the audit firms reviewed banks audited by them in the last two financial years, in order to guarantee their independence. The assignment of banking groups to the audit firms is detailed in Annex II to this report.

The ultimate aim of the work performed in this stage has been to verify the quality of the information referred to the loan portfolio and foreclosed assets, the proper accounting classification, the adequate segmentation and the sufficiency of the provisions recorded given that this information is used as an input in the bottom-up exercise.
Specifically, the following exercises and analyses were performed for each banking group, which comprise both extensive reviews of the entire loan portfolio and of samples of borrowers and transactions required for this purpose:

- The tie-in of inventories of the banking book and foreclosed assets with accounting records which provides granular information at the level of each transaction
- The proper classification of the portfolio on the basis of the status of the borrower, the value of the collateral and the sector. Verification of the credit risk distribution (CRD) table in order to review the correct segmentation of risk operations and their accounting status and the type of collateral related to them, covering all the CRD segments (developers, construction, large firms, SMEs, individuals' mortgages and other exposures to individuals)..
- Checks on additional provisions, calculated by the bank, required by Royal Decree-Law 2/2012 and Royal Decree-Law 18/2012, based on the portfolio as at 31 December 2011.
- Evaluation of the calculation by automatic-NPL-treatment of the provisions required by accounting regulations.
- Itemised analysis of a sample of cases so as to reach a conclusion in relation to the amount of the accounting provisions recorded by the bank as at 31 December 2011 for the borrowers included in said sample:
  - Review of a sample of more than 115,000 operations which relate to 14,000 debtors, far above that used in similar exercises elsewhere.
  - The average sample per bank amounted to 770 borrowers, corresponding to some 5,700 operations per bank.
  - Use of very broad samples in the highest risk segments with a high level of coverage (28% of total credit in the construction and real estate development segments and 27% in the large firms segment).
  - Selection of random samples, especially for the most granular segments: SMEs and residential mortgages.
  - Review of a broad sample of restructured/refinanced operations, collateral and foreclosed assets.
  - Coverage ratio of sample amounts to 11% of the credit exposures in Spain of the participants.

In order to guarantee that the work would be performed according to the needs of the exercise, both in terms of content and deadlines, a coordination and weekly monitoring process was created with a project management structure led by the Banco de España and supported by an independent consultancy (The Boston Consulting Group). The exhaustive monitoring imposed by the management of the project, together with the definition of shared terms of reference with a single, consistent set of guidelines, has ensured that the exercise has been performed homogeneously by the audit firms and all the banks included have been treated equitably. Additionally, the coordination and monitoring team ensured that the audit firms' work generated relevant inputs for the capital needs calculation process (Work Area 4 described below) within the deadlines set for the whole exercise.

The four large audit firms involved in Work Area 2 have expended considerable effort and been highly committed to the exercise, exclusively devoting a large number of resources to it for three months. In total more than 400 individuals have been assigned to various work teams and Spanish and international experts in risk, legal matters and the real estate sector have also been involved. The work ended on 15 August 2012 after it was approved by the programme's monitoring committees.

The result of the work performed in this Work Area, all of which is included in the results of the stress tests presented today consolidates the exhaustive and granular analyses performed by Oliver Wyman in the bottom-up stress tests and permits the following conclusions to be drawn:

- The analysis of data quality shows that the "loan-by-loan" databases of banks' credit portfolios have been reviewed and satisfactorily matched with the accounting books and the credit risk distribution (CRD) table for all banks.
- As for reclassifications by segment of the credit risk distribution (CRD) table, in the review of the sample it was found that a low level of exposures had been included by mistake in the SME and Corporate segments, which should have been in real estate development and construction. These data are considerably lower than the assumptions made by OW in the top-down exercise
- The analyses of banks' loan portfolios and foreclosed assets in order to value the correct size of their provisioning levels identified a non-material shortfall in provisions for the system as a whole, most of which is in the real estate development portfolio, that will be covered by the provisions required by Royal Decree-Law 2/2012 and Royal Decree-Law 18/2012. Specifically:
    - As a result of the review, using IT procedures, of the banks' entire loan portfolios, it has been possible to validate the figures recorded and it was estimated that there was a shortfall of €1.03 billion. The banks have already taken measures to remedy the technical shortfalls notified to them.
    - The review of the calculation of the provisioning needs required by Royal Decree-Law 2/2012 and Royal Decree-Law 18/2012, permitted the verification of the accuracy of the figures estimated by the banks for the portfolio as a whole, errors were detected for the banks as a whole which amount to €1.32 billion (2.6% of the total required). The banks have already taken note of this in order to suitably record these provisions before the regulatory deadline (December 2012 – 2013 for business combinations).
    - The samples selected have determined a further provisioning need in the real estate development segment of approximately €3.9 billion. This amount will be covered by the additional provisions required by the above-mentioned Royal Decree-Laws (approximately €52 billion). In the other segments, the additional provisions amount to approximately €1.5 billion and essentially relate to the portion of firms which were not randomly selected. A part of these provisions has already been recorded, as a result of the poor performance of borrowers and the remainder will be recorded before the end of the year. This figure represents a small percentage of exposures which is less than 1%.

- As for the information supplied by banks on the level of refinancing by segment, the sample selected disclosed low levels of refinancing which were not marked in the SME and retail segments (3% and 1%, respectively) and were higher in the real estate development sector (21%).

**Work Area 3: Analysis of NPL management processes and systems**

In addition to the work described in the previous work area, on 31 August the four audit firms assessed the processes and systems for the management of NPLs at each of the banks, for the purpose of assessing their respective capacities to withstand a possible increase in the volume of NPLs in the next few years (focusing in particular on the individuals and SME segments).

Specifically, the breakdown of the analyses and the exercises performed can be summarised as follows:

- Understanding and detailed description of banks' NPL management policies.
- Analysis of the IT (information technology) platform support in NPL management.
- Review of the control and internal audit framework.
- Check of the applicability of NPL management policies and processes through a "walkthrough" test, consisting in tracing a limited number of cases step-by-step, to check the functioning of the most important processes in each segment.
- Description of changes in the volume of NPLs under management and of the resources assigned to this department.
- Issuance of recommendations to improve current NPL management models, especially in the commercial banking segment (SMEs and individuals).

**As a result of the analyses and reviews carried out in this work area, the auditors highlighted the following:**

- The banks analysed have complete NPL management systems which include real estate foreclosure and sale management. These systems are able to absorb the current volume of NPLs and potential future increases in them.
- The budgets and teams assigned to the NPL management departments have grown in recent years in line with the volume of NPLs so as to form a body of resources which could handle a possible increase in NPLs in the future.
- The technology platforms supporting NPL management are robust and scalable. The tendency observed in recent years indicates that a significant and growing investment has been made in the development of IT platforms.
- Regarding the review of the control and internal audit framework, the banks have internal departments which carry out regular reviews, including efficient documentation of NPL management policies, procedures and processes.
- Finally, the four audit firms have issued for each bank a number of recommendations in order to increase the effectiveness of the current NPL management models.

The tasks in this work area were completed on 31 August 2012. The results of all the work performed in Areas of Work 2 and 3 were used as the inputs for performing the bottom-up stress tests described below.

**Work Area 4: Evaluation of additional capital needs according to the bottom-up analysis**

Work Area 4 consisted of an examination and more detailed analysis, including a thorough and detailed valuation of banks' portfolios, to determine the capital needs of each institution based on the its risk profile. The results of the bottom-up analysis are set out in detail in the report published today by Oliver Wyman.

Details of the methodological parameters considered in the bottom-up analysis:

- Timeframe spanning three years (2012, 2013 and 2014).
- Resident private sector credit portfolio including real estate assets.
- Data in the balance sheets as at 31 December 2011 taken as reference.

- As in other stress tests conducted in the European Union, for the sake of comparability the (core tier 1) capital requirement based on the ABE definition has been set at 6% for the adverse scenario and at 9% for the baseline scenario.
- The analysis takes into account the expected losses after the impact of the macroeconomic scenarios described, as well as other assumptions on the parameters and risk characteristics defined by Oliver Wyman. Also taken into account are the elements available for absorbing the expected loss assumptions, such as the capacity to generate profits, provisions recorded and excess capital.

The audit work was used in this phase of the project to validate the databases of operations, which guarantees the quality and consistency of the information of all the banks that was used by OW.

Throughout this work the auditors selected a sample of 115,000 operations which makes the exercise more granular. From the latter, in order to refine the assumptions and parameters used, the auditors took a random sample of more than 16,000 operations, which enabled OW to extrapolate the results obtained in the auditors' work to the whole population.

The details of this work area are set out in the report of Oliver Wyman, published today 28 September.

## 5 Results

The report published today by the consultancy Oliver Wyman includes an estimate of the total capital needs of the Spanish banking system as a whole and of each of the 14 banking groups analysed. This estimate is made for a baseline scenario and for an adverse scenario.

The most notable of the results announced today are:

- 7 Spanish banking groups meet the capital requirements even in the event of a hypothetical severe worsening of the Spanish economy (adverse scenario): B.Santander, BBVA, CaixaBank, Banco Sabadell, Kutxabank, Unicaja (considering the business combination with CEISS) and Bankinter. These groups, which represent 62% of the credit portfolio analysed, have excess capital of €39.3 billion before taxes under the adverse scenario**.**

- The groups in which preliminary capital needs were detected (7 of 14) represent 38% of the credit portfolio analysed.
  - The largest capital needs are concentrated in those banking groups in which the FROB has a majority holding (BFA/Bankia, Catalunya Caixa, NCG Banco and Banco de Valencia).
  - Another three banking groups have capital needs and have to submit recapitalisation plans to the Banco de España, after which the necessary government assistance, if any, will be determined (BMN, Libercaja and Popular-Pastor)

The result of the tests is total recapitalisation needs for the 14 banking groups analysed of €24 billion (€25.9 billion after the tax effect) under the baseline scenario and of €57.3 billion (€53.7 billion after the tax effect) under the adverse scenario.

If the bank integration processes under way are disregarded, the result is a figure for additional capital needs of €25.9 billion (€27.4 billion after the tax effect) under the baseline scenario and of €59.3 billion (€55.9 billion after the tax effect) under the adverse scenario.

As noted above, the capital needs published today **do not necessarily coincide with the government assistance to be received by the banks, which will be set by the Banco de España and the European Commission.**

### 5.1 Results of the system-level bottom-up analysis

The bottom-up analysis included 14 banking groups representing approximately 90% of the Spanish banking system.

The data on which the banking group analysis was made are as follows (data as at 31 December 2011):

- Total customer loans in the Spanish market of €1.4 trillion
- Total profit from operations in Spain of €19.3 billion before provisions, plus €7.9 billion of profit after provisions and taxes from international operations
- Total provisions associated with operations in Spain of €110.1 billion
- Total core tier 1 capital of €164.8 billion (CT1 of 9.5% according to the ABE definition)

The analysis carried out for the 3-year period (2012-2014) yielded the following results:

- Total cumulative losses on the credit portfolio (operations in Spain) of €183.3 billion under the baseline scenario and of €270 billion under the adverse scenario

  Under the adverse scenario, total 2012-2014 cumulative losses for the total system are as follows:

| Adverse scenario data | | | | | | |
|---|---|---|---|---|---|---|
| **Segment/ Asset type** | **2011 balance sheet** (€bn) | **Losses on NPLs** (€bn) | **Losses on performing loans**[1] (€bn) | **Cumulative losses** (% of 2011 balance sheet) | **Cumulative aggregate PD** (% of 2011 balance sheet) | **Aggregate LGD** (% of 2011 balance sheet) |
| Property developers | 227 | 38 | 59 | 43 | 87 | 47 |
| Residential mortgages | 602 | 6 | 18 | 4.1 | 15 | 22 |
| Corporates | 254 | 6 | 20 | 10 | 17 | 49 |
| SMEs | 237 | 10 | 30 | 17 | 35 | 42 |
| Construction | 41 | 2 | 7 | 21 | 43 | 45 |
| Other loans to individuals | 74 | 3 | 11 | 19 | 21 | 75 |
| **Total credit portfolio** | **1,436** | **65** | **145** | **15** | **29** | **42** |
| **Foreclosed assets** | 88 | 55 | - | 63 | - | - |

- It is estimated that the total loss absorption capacity of the system in the same period is €252 billion under the adverse scenario. This calculation includes provisions already recorded, profit before provisions and taxes in Spain, attributed profit after provisions and taxes from international operations, the impact of Asset Protection Schemes (APSs) and the excess capital vs. the capital required under the adverse scenario.

- Considering the combination of both items, the capital needs for the system as a whole amount to €57.3 billion under the adverse scenario (€53.7 billion after the tax effect), taking into account only the volumes relating to banks with capital needs. It should be noted that there are banks which have excess

[1] Not including €5.5 billion of losses derived from the new portfolio originated between 2012 and 2014.

capital not taken into account for the purpose of reducing the system's capital needs and which amounts to €39.3 billion before taxes. These capital needs are estimated at €24 billion under the baseline scenario (€25.9 billion after the tax effect).

### 5.2 Results of the bottom-up analysis at banking-group level

The report published today by the independent consultancy Oliver Wyman contains the following estimates of capital needs for each of the 14 banking groups analysed under the baseline and adverse scenarios, taking into account the integration processes under way:

| Capital needs after the tax effect (millions of euro) | | |
|---|---|---|
| | Baseline scenario € million | Adverse scenario € million |
| Santander Group | + 19,181 | + 25,297 |
| BBVA | + 10,945 | + 11,183 |
| Caixabank+Cívica | + 9,421 | + 5,720 |
| Kutxabank | + 3,132 | + 2,188 |
| Sabadell+CAM | +3,321 | +915 |
| Bankinter | +393 | +399 |
| Unicaja+CEISS | +1,300 | +128 |
| Ibercaja+Caja3+Liberbank | +492 | - 2,108 |
| BMN | - 368 | - 2,208 |
| Popular | +677 | - 3,223 |
| Banco de Valencia | - 1,846 | - 3,462 |
| NCG Banco | - 3,966 | - 7,176 |
| Catalunyabank | - 6,488 | - 10,825 |
| Bankia-BFA | - 13,230 | - 24,743 |
| Total System (only needs) | - 25,898 | - 53,745 |

If the integration processes are disregarded, the breakdown of capital needs is as follows:

| Capital needs after the tax effect (millions of euro) | | |
|---|---|---|
| | Baseline scenario € million | Adverse scenario € million |
| Santander Group | + 19,181 | + 25,297 |
| BBVA | + 10,945 | + 11,183 |
| Caixabank+Cívica | + 9,421 | + 5,720 |
| Kutxabank | + 3,132 | + 2,188 |
| Sabadell+CAM | +3,321 | +915 |
| Bankinter | +393 | +399 |
| Unicaja | +969 | +452 |
| CEISS | -1,269 | -2,063 |
| Ibercaja | +389 | -226 |
| Liberbank | +103 | -1,198 |
| Caja3 | -188 | -779 |
| BMN | - 368 | - 2,208 |
| Popular | +677 | - 3,223 |
| Banco de Valencia | - 1,846 | - 3,462 |
| NCG Banco | - 3,966 | - 7,176 |
| Catalunyabank | - 6,488 | - 10,825 |
| Bankia-BFA | - 13,230 | - 24,743 |
| Total System (only needs) | -27,355 | -55,902 |

## ANNEXES

### Annex I: Details of the baseline and adverse scenarios

The following table details the main variables used in the baseline and adverse scenarios:

**Macroeconomic scenarios 2012-2014**

| | | | Baseline | | | Adverse | | |
|---|---|---|---|---|---|---|---|---|
| | | 2011 | 2012 | 2013 | 2014 | 2012 | 2013 | 2014 |
| GDP | Real GDP | 0.7 | -1.7 | -0.3 | 0.3 | -4.1 | -2.1 | -0.3 |
| | Nominal GDP | 2.1 | -0.7 | 0.7 | 1.2 | -4.1 | -2.8 | -0.2 |
| Unemployment | Unemployment rate | 21.6 | 23.8 | 23.5 | 23.4 | 25.0 | 26.8 | 27.2 |
| Price changes | Harmonised CPI | 3.1 | 1.8 | 1.6 | 1.4 | 1.1 | 0.0 | 0.3 |
| | GDP deflator | 1.4 | 1.0 | 1.0 | 0.9 | 0.0 | -0.7 | 0.1 |
| Real estate sector | House prices | -5.6 | -5.6 | -2.8 | -1.5 | -19.9 | -4.5 | -2.0 |
| | Land prices | -6.7 | -25.0 | -12.5 | -5.0 | -50.0 | -16.0 | -6.0 |
| Interest rate | EURIBOR, 3 months | 1.4 | 0.9 | 0.8 | 0.8 | 1.9 | 1.8 | 1.8 |
| | EURIBOR, 12 months | 2.0 | 1.6 | 1.5 | 1.5 | 2.6 | 2.5 | 2.5 |
| | Sovereign debt, 10 years | 5.6 | 6.4 | 6.7 | 6.7 | 7.4 | 7.7 | 7.7 |
| Exchange rates | USD / EUR exchange rate | 1.4 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 |
| Loans to Other Resident Sectors | Households | -1.5 | -3.8 | -3.1 | -2.7 | -6.8 | -6.8 | -4.0 |
| | Non-financial corp. | -3.6 | -5.3 | -4.3 | -2.7 | -6.4 | -5.3 | -4.0 |
| Stock exchange indices | Madrid Stock Exchange Index | 5.6 | 6.4 | 6.7 | 6.7 | 7.4 | 7.7 | 7.7 |

## Annex II: Auditors of the banking groups

The following table lists which of the big four audit firms (Deloitte, PwC, Ernst&Young, KPMG) were assigned to the participating groups in Work Area 2 for the accounting review of the loan portfolio and of assets foreclosed or received in satisfaction of debt

| Auditor | Group |
|---|---|
| Deloitte | Banco Popular Español |
| | Banco Pastor |
| | Banco Sabadell |
| | Banco CAM |
| PwC | Bankia – BFA |
| | Caixabank |
| | Banca Cívica |
| | Banco de Valencia |
| Ernst&Young | Banco Santander |
| | Banco Español de Crédito (Banesto) |
| | Banco Bilbao Vizcaya Argentaria |
| | Unnim Banc |
| | Unicaja Banco |
| | Banco Ceiss |
| | Banco Mare Nostrum |
| | Liberbank |
| KPMG | Caja 3 |
| | Ibercaja Banco |
| | Bankinter |
| | NCG Banco |
| | Catalunya Banc |
| | Kutxabank |