

# CEBS STRESS TEST: PRESENTATION OF THE RESULTS FOR THE SPANISH INSTITUTIONS

24 JULY 2010  
MADRID

# CONTACT POINTS AND BACKGROUND INFORMATION



- **CEBS stress tests results were presented yesterday. Regarding the information of the results for the Spanish banking institutions, the relevant documents are:**
  - “Assessment of the stress tests”
  - “Results of the stress tests for the Spanish banks and savings banks”
- **These documents are an additional step in transparency, that reinforces the general transparency policy of Banco de España**
  - Monthly and quarterly publication of statistical information of the banking sector, including the net lending from the ECB and the non performing loan ratios
  - Financial Stability Report, which adds additional “non-statistical” information (e.g. problematic exposures to the property developers sector, including doubtful, substandard and assets foreclosures assets)
  - Speeches and presentations of senior official of Banco de España
  - Rules based regulation

# DISCLAIMER AND OBJECTIVE OF THE PRESENTATION



- **DISCLAIMER:** due to legal confidentiality obligations, neither the results nor the situation of the individual cases will be commented or assessed
  - Questions on issues about the results of the individual institutions should be asked to them directly as they are the first responsible for commenting on their own circumstances
  
- **OBJECTIVE:** the purpose of this presentation is to offer the assessment of the results for Spanish entities
  - Questions are welcomed as we aim to clarify doubts in order to facilitate your own judgement on the situation of the Spanish banking sector

# MAIN TAKEAWAYS OF THE PRESENTATION



## ■ **Transparency commitment**

- The commitment made at the European level was that participating institutions of each country should represent 50% of the banking sector. Banco de España has conducted the stress test for all savings banks and for almost all commercial banks, including all the listed ones
- More granular information in two key aspects: (1) detailed portfolio breakdown; (2) clear identification of received public capital prior to the stress test exercise

## ■ **Supervisory stress test**

- More granular information and resources devoted to the stress test exercise
- Rigorous exercise of supervisory nature: take into account the trade off between preserving the legitimate private interest (stakeholders) and assuring that the capital level is enough to ensure a sound and efficient banking sector

## ■ **Adverse scenario: improbable and extreme**

- -2.6 percentage points of GDP in the period 2010-2011
- It is outside the current forecast ranges of national/international institutions and private annalists



## ■ Potential losses

- In line with those obtained in the US SCAP, and with those obtained in other simulations
- Much higher than in other previous banking crisis. Potential losses over RWA for savings banks in comparison with incurred losses over RWA are +9.9pp vs. Finish crisis (1990-93); +8.3pp vs. Swedish and Norwegian crisis (1990-93); and +1pp vs. Korean crisis (1997-99)

## ■ Loss absorption capacity

- Spanish institutions strove in 2008 and 2009 to restructure their balance sheets making substantial specific provisions, that are added to the still available generic fund
- Net operating income generation capacity, despite the severity of the stress on the operating margins

■ **Only savings banks have a need for capital: 16.193 million €, including FROB and DGS Funds**

■ **Only 4 savings banks have a need for additional capital: 1.835 million €**

# CONTENT OF THE PRESENTATION



- **Results**
- **Assessment**
- **Conclusions**
- **Q&As**

## CEBS STRESS-TEST EXERCISE



- **Developed in coordination with:**

- *ECB and European Commission provides support on the design of the scenarios*
- *National authorities were the ultimate responsible to carry out the exercises*

- **Characteristics of the exercise**

- *Based on what if?: it reflects plausible but extreme scenarios*
- *A benchmark 6% TIER 1 ratio: it is not a legal requirement.*
- *An entity not meeting the target ratio is by no means insolvent*
- *Scope to cover at least 50% of domestic banking system: involving 91 banking groups across EU*
- *Covering 2 scenarios:*
  - *Benchmark*
  - *Adverse, including sovereign shock*
- *Uniform format for publication of results*

## SCOPE OF THE EXERCISE IN SPAIN



- **Spanish stress test scope is wider:**
  - 100% of coverage of saving entities
  - All listed Spanish banks are included in the exercise
- **As a result, 27 Spanish groups are included (out of 91 in the EU exercise)**
- **For saving banks involved in integration processes, the resulting group was the institution considered in the exercise regardless of the level of implementation of the plan:**
  - It is the relevant unit for the future solvency
  - The public support granted by FROB is assigned to the new groups, not to individual entities

## TRANSPARENCY OF THE EXERCISE IN SPAIN



- **EU exercise requires a minimum set of information to be published**
- **Spanish stress test goes beyond that level**
  - Reasoning: expectation to dispel investors' doubts about the Spanish banking system.
- **A number of additional data are published:**
  - Impairment information is broken down in various portfolios (including exposure to real estate development).
  - More detailed information about provisions and capital.
- **Wither scope of institutions covered**

# PRESENTING THE RESULTS



## •**Templates agreed at EU level:**

- Summary of the results of the benchmark and adverse scenarios.
- Additional information about the sovereign shock under the adverse scenario.
- Detailed breakdown of sovereign exposures.

## •**Spanish additional templates :**

- Section A: information about accumulated gross impairments, broken down by seven different portfolios (financial institutions, corporate, real estate development and repossessed assets, SME, mortgages, other retail exposures, other exposures).
- Section B: available resources for loss coverage, broken down by different types (provisions, unrealised gains, pre-impairment income, tax effect).
- Section C: impact of the losses in capital, with details of new capital increases and public support.
- Note: detailed information about external support received.

# COMPARISON CEBS AND SPANISH FORMATS



## Actual results

### At December 31, 2009

	[unit] reporting currency
Total Tier 1 capital	T1
Total regulatory capital	T2
Total risk weighted assets	T3

Pre-impairment income (including operating expenses)	T4
Impairment losses on financial assets in the banking book	T5

1 yr Loss rate on Corporate exposures (%) <sup>1</sup>	T6
1 yr Loss rate on Retail exposures (%) <sup>1</sup>	T7

Tier 1 ratio (%)	T8
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### Benchmark scenario at December 31, 2011<sup>2</sup>

	[unit] reporting currency
Total Tier 1 capital after the benchmark scenario	T9
Total regulatory capital after the benchmark scenario	T10
Total risk weighted assets after the benchmark scenario	T11

Tier 1 ratio (%) after the benchmark scenario	T12
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### Adverse scenario at December 31, 2011<sup>2</sup>

	[unit] reporting currency
Total Tier 1 capital after the adverse scenario	T13
Total regulatory capital after the adverse scenario	T14
Total risk weighted assets after the adverse scenario	T15

2 yr cumulative pre-impairment income after the adverse scenario (including operating expenses) <sup>2</sup>	T16
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2 yr cumulative impairment losses on financial assets in the banking book after the adverse scenario <sup>2</sup>	T17
2 yr cumulative losses on the trading book after the adverse scenario <sup>2</sup>	T18

2 yr Loss rate on Corporate exposures (%) after the adverse scenario <sup>1, 2</sup>	T19
2 yr Loss rate on Retail exposures (%) after the adverse scenario <sup>1, 2</sup>	T20

Tier 1 ratio (%) after the adverse scenario	T21
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### Additional sovereign shock on the adverse scenario at December 31, 2011

	[unit] reporting currency
Additional impairment losses on the banking book after the sovereign shock <sup>2</sup>	T22
Additional losses on sovereign exposures in the trading book after the sovereign shock <sup>2</sup>	T23

2 yr Loss rate on Corporate exposures (%) after the adverse scenario and sovereign shock <sup>1, 2, 3</sup>	T24
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2 yr Loss rate on Retail exposures (%) after the adverse scenario and sovereign shock <sup>1, 2, 3</sup>	T25
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Tier 1 ratio (%) after the adverse scenario and sovereign shock	T26
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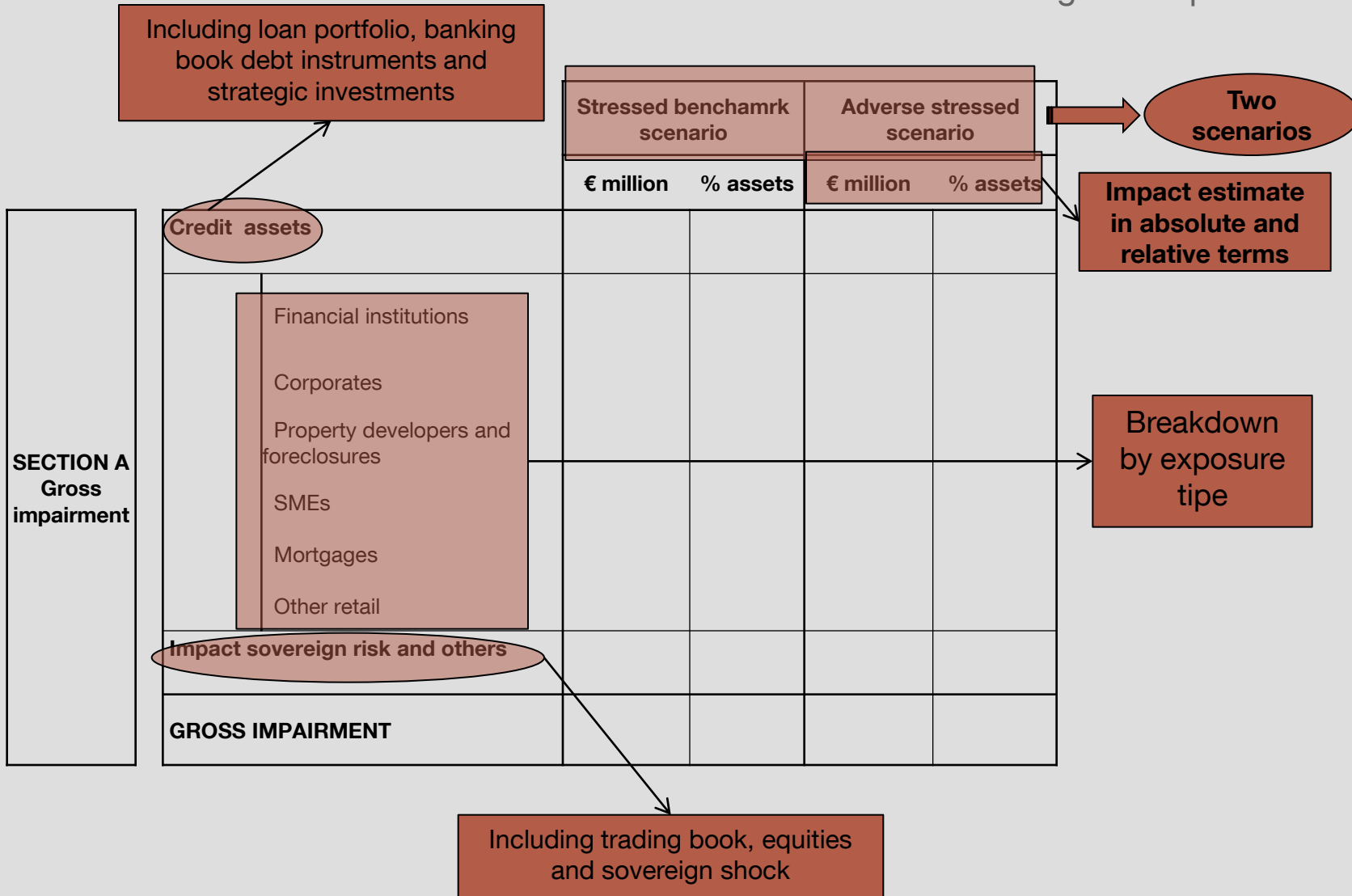
Additional capital needed to reach a 6 % Tier 1 ratio under the adverse scenario + additional sovereign shock, at the end of 2011	T27
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		Stressed benchmark scenario		Adverse stressed scenario	
		€ million	% assets	€ million	% assets
<b>Credit assets<sup>1</sup></b>					
	Financial institutions				
	Corporates				
	Property developers and foreclosures				
	SMEs				
	Mortgages				
	Other retail				
<b>Impact sovereign risk and others<sup>2</sup></b>					
<b>GROSS IMPAIRMENT</b>				F1	
<b>PROVISIONS</b>	Specific			F2	
	General			F3	
<b>NET OPERATING INCOME AND CAPITAL GAINS</b>					
<b>TAX IMPACT</b>					
<b>NET IMPAIRMENT</b>					
		Stressed benchmark scenario		Adverse stressed scenario	
<b>INITIAL SITUATION 2009</b>		€ million	% RWA 2009	€ million	% RWA 2009
	Tier 1 dic 2009	T1	T8	T1	T8
<b>FINAL SITUATION 2011</b>		€ million	% RWA 2011	€ million	% RWA 2011
	Net impairment				
	Dividend, fair value of mergers and others				
	Tier 1 Dec 2011 without FROB				
	Committed FROB				
	Tier 1 Dec 2011	T9	T12		T26
	Additional capital to reach Tier1 6%			T27	
		Stressed benchmark scenario		Adverse stressed scenario	
	DGF Support				
	Committed FROB				
	Additional Capital to reach Tier1 6%				T27
<b>TOTAL</b>					

# EXPLANATION OF SPANISH TEMPLATES



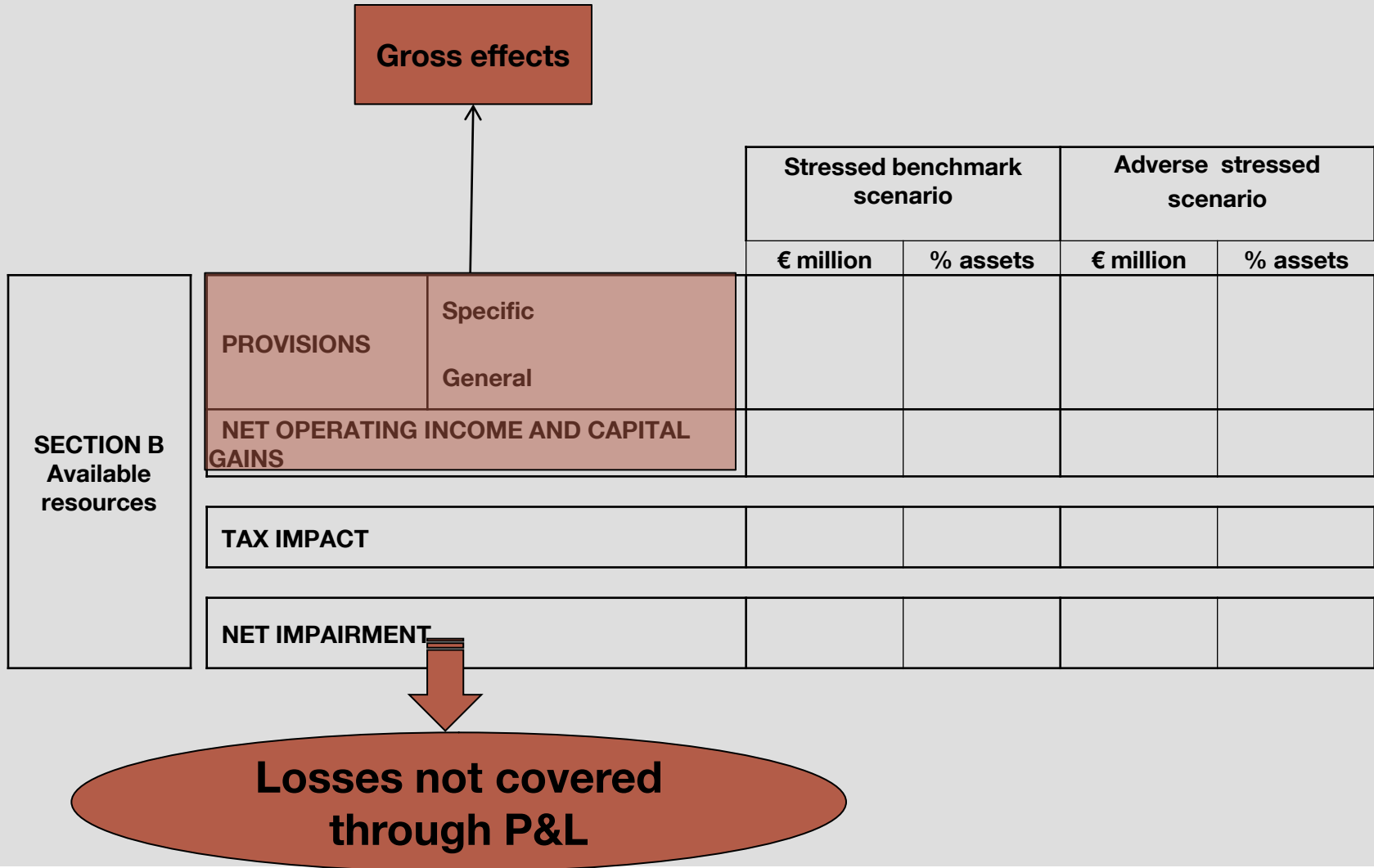
## Section A: gross impairment



# EXPLANATION OF SPANISH TEMPLATES



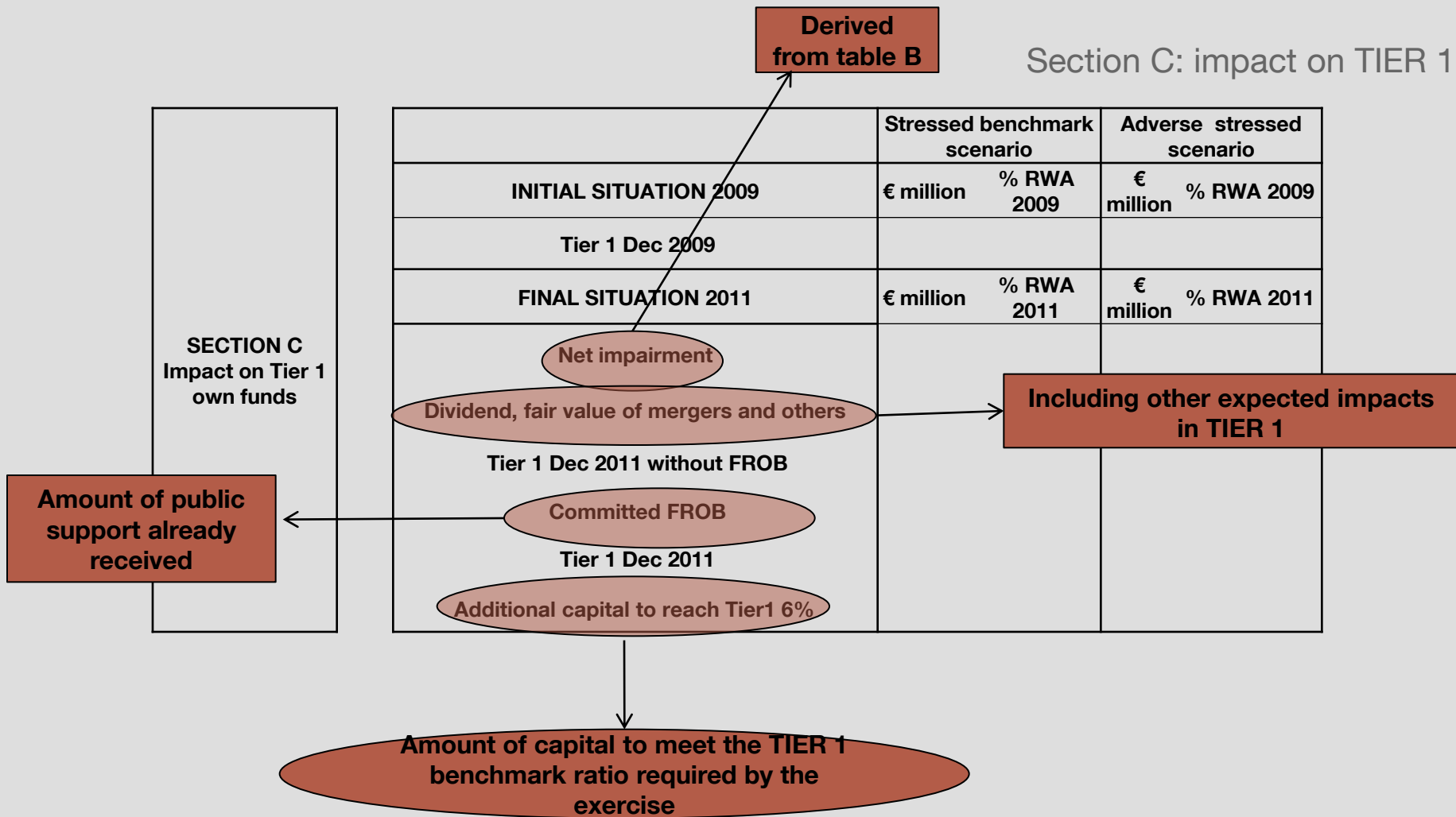
Section B: resources for loss coverage



# EXPLANATION OF SPANISH TEMPLATES



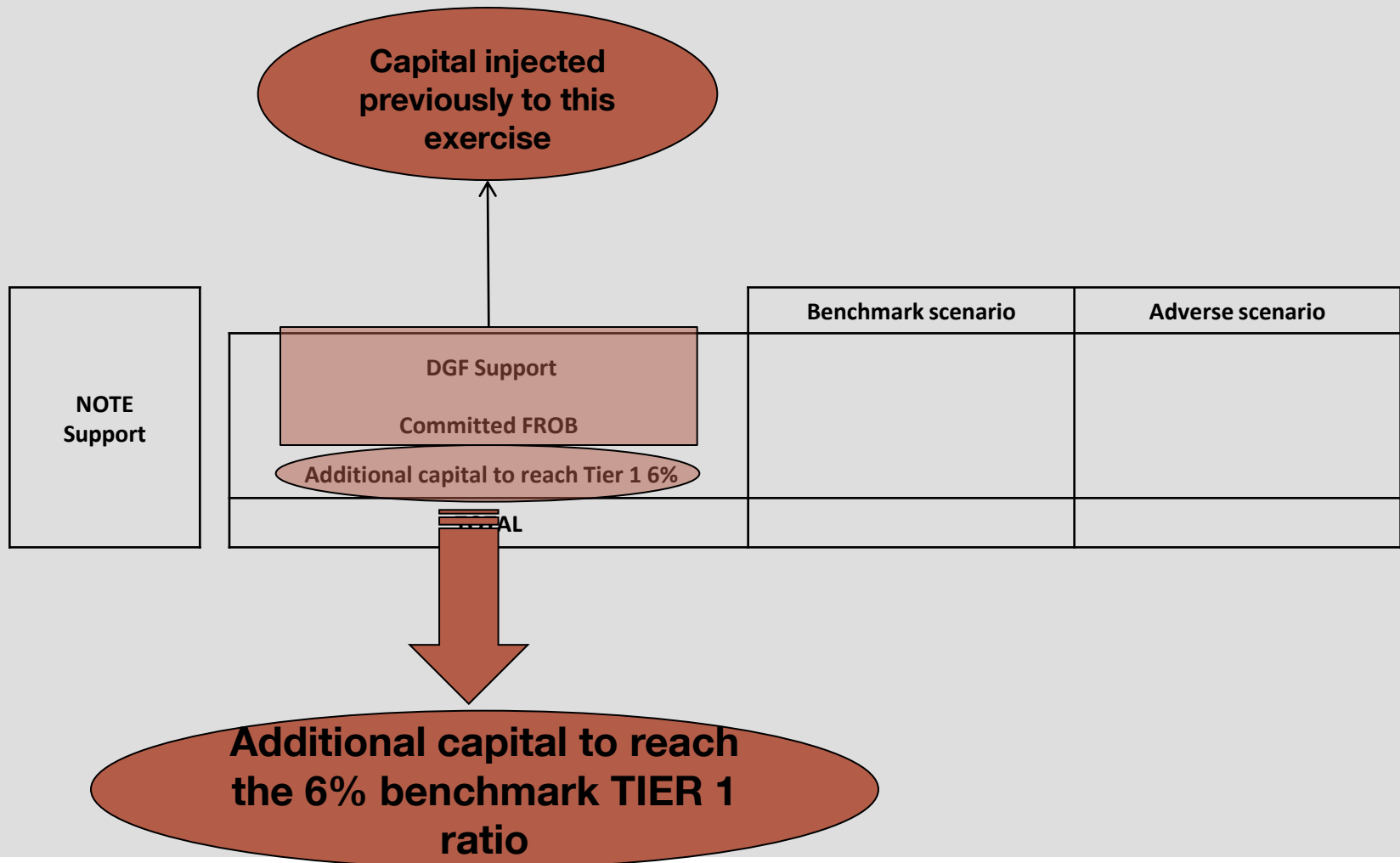
Section C: impact on TIER 1



# EXPLANATION OF SPANISH TEMPLATES



Note: capital support

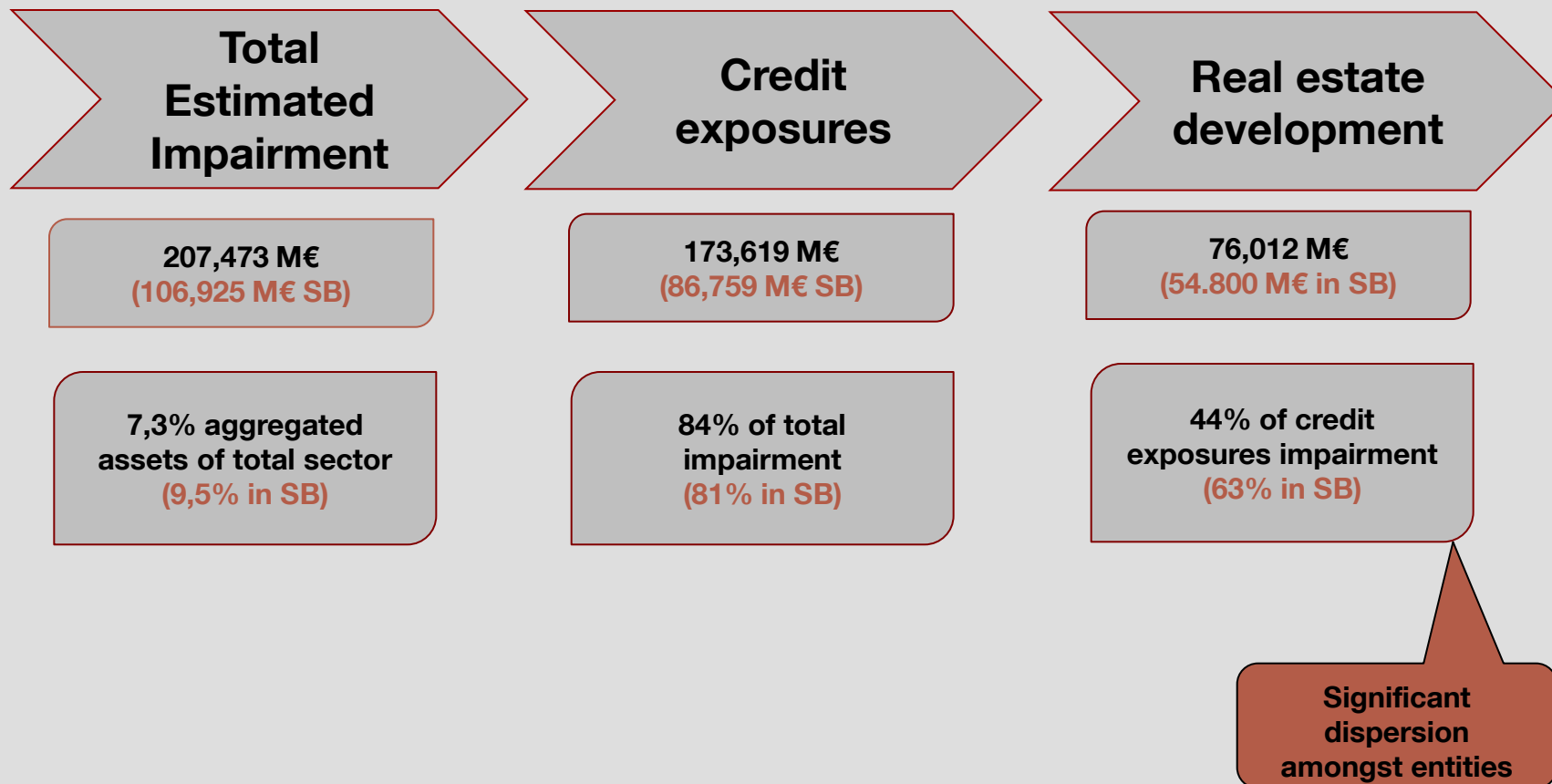


# SPANISH RESULTS



Adverse scenario

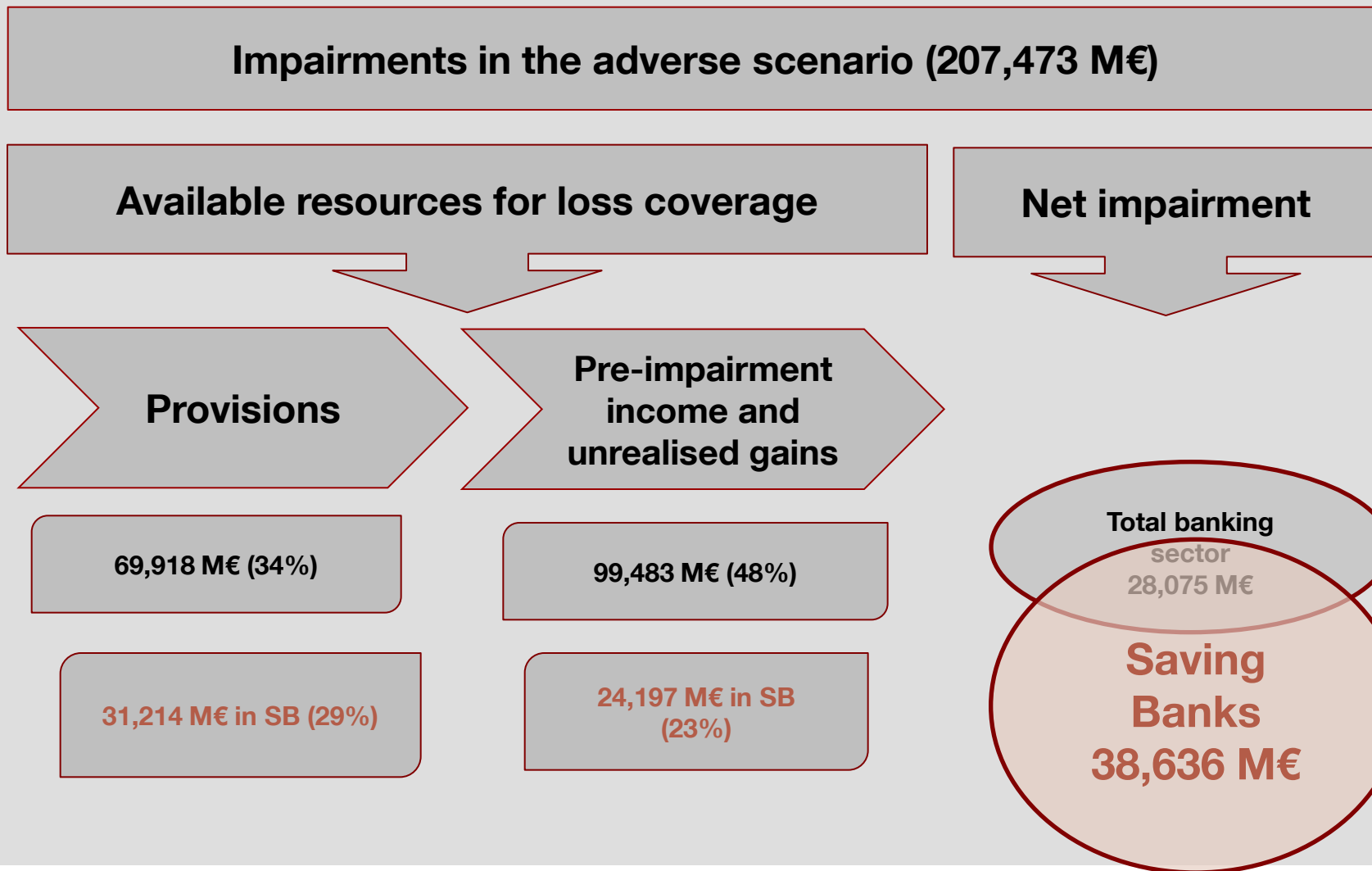
## Impairments in the adverse scenario



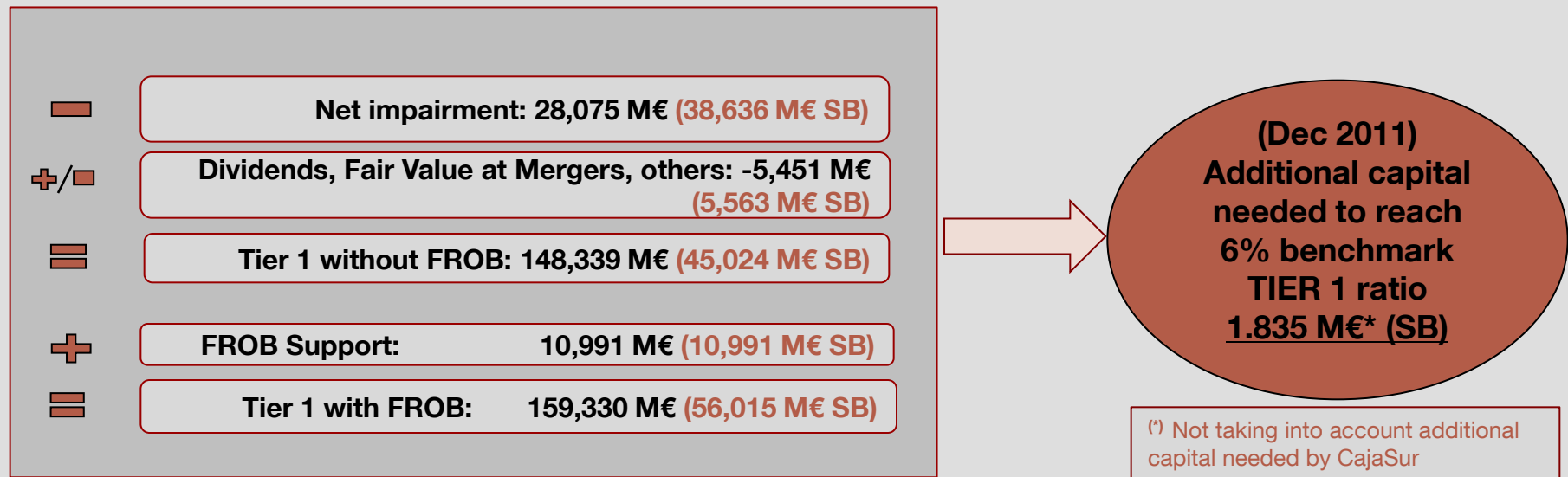
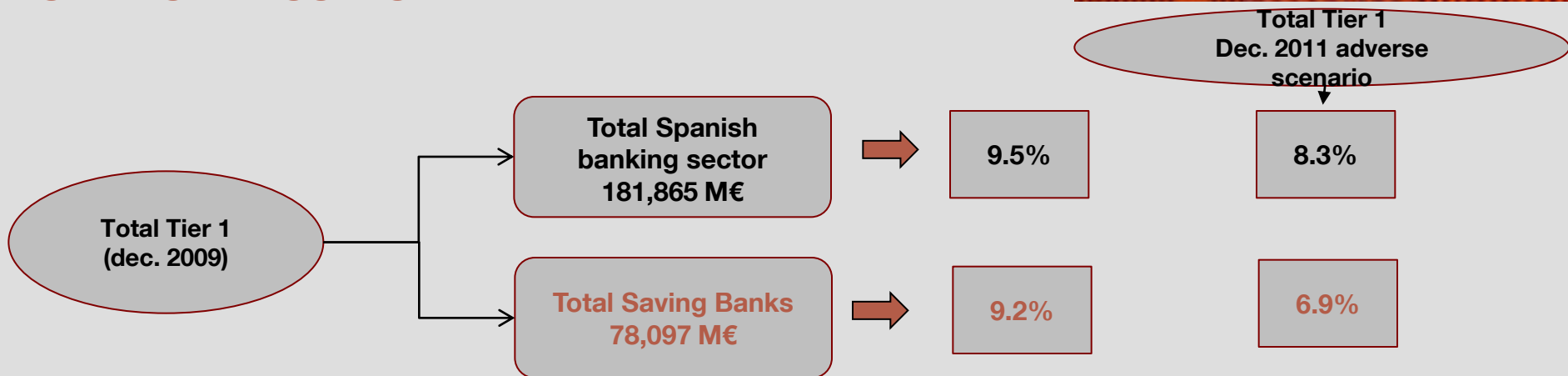
# SPANISH RESULTS



Adverse scenario



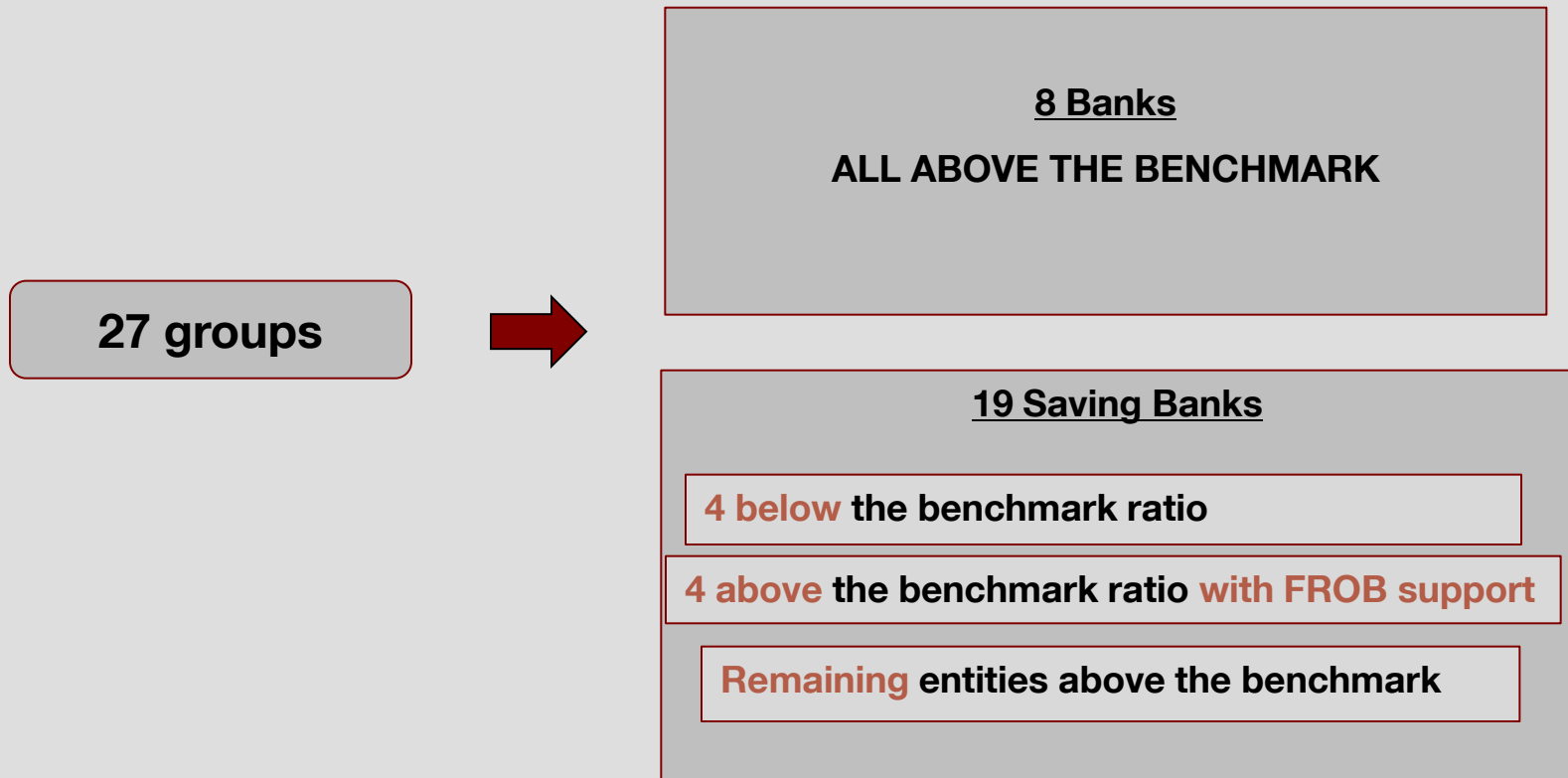
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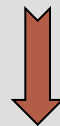
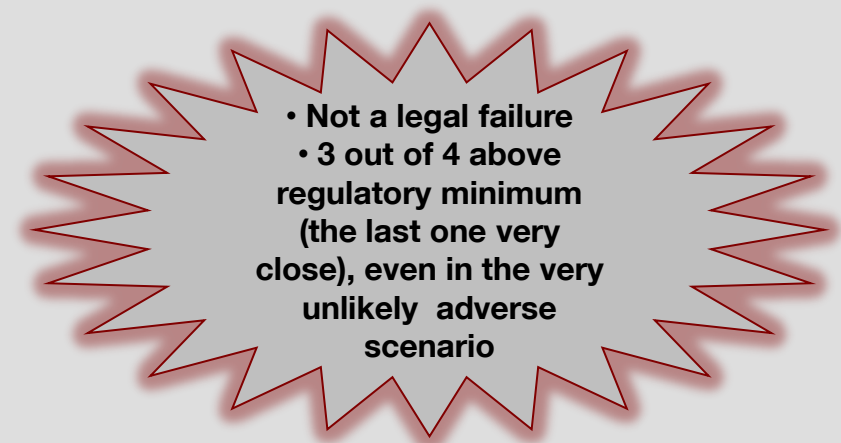
Adverse scenario



# RECAPITALISATION. GROUPS UNDER BENCHMARK

**4 SAVING BANKS** below the benchmark  
**TIER 1 ratio in the adverse scenario**

<b>Diada</b>	<b>3.9%</b>
<b>Unnim</b>	<b>4.5%</b>
<b>Banca Cívica</b>	<b>4.7%</b>
<b>Espiga</b>	<b>5.6%</b>



**RECAPITALISATION PLAN**



- Voluntary. Markets
- FROB

## EXTERNAL SUPPORT AND ADDITIONAL CAPITAL



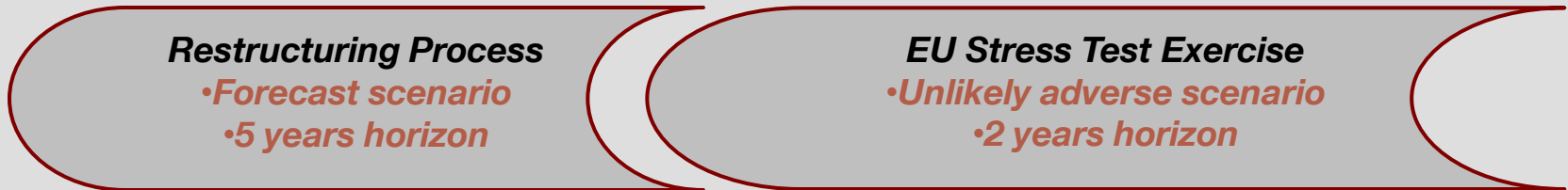
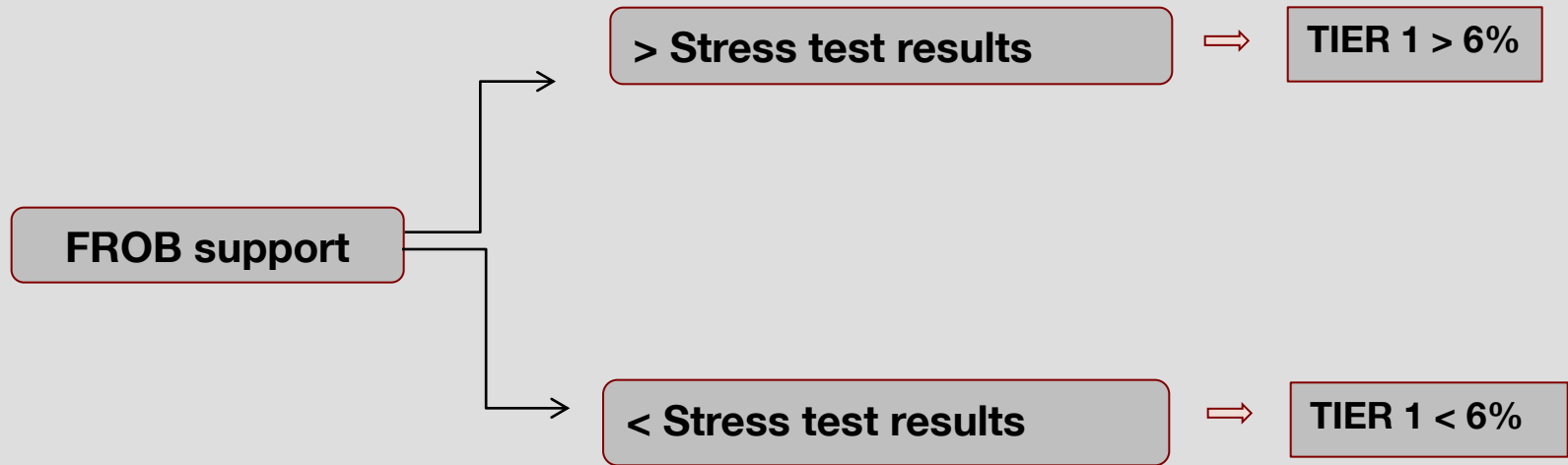
	M€
FROB <sup>(1)</sup>	10,583
Deposit Guarantee Scheme	3,775
Additional Capital to meet the benchmark TIER 1 ratio <sup>(2)</sup>	1,835
<b>Total amount</b>	<b>16,193</b>

← **1,5% GDP**

<sup>(1)</sup> On 15<sup>th</sup> July the Committee of the FROB drawn up the Restructuring plan for CajaSur (EPA up to 392 M€ vs. 800 M€ of provisional support)

<sup>(2)</sup> Not taking into account 206 M€ (that according to the adverse scenario CajaSur would need)

# RESULTS OF THE STRESS TEST VS FROB SUPPORT



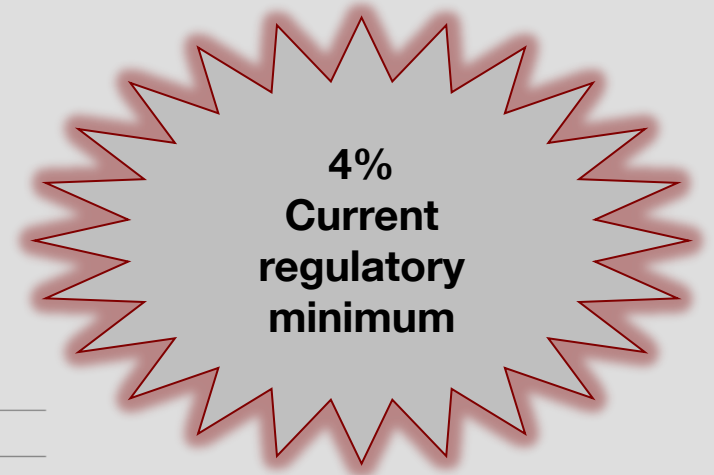
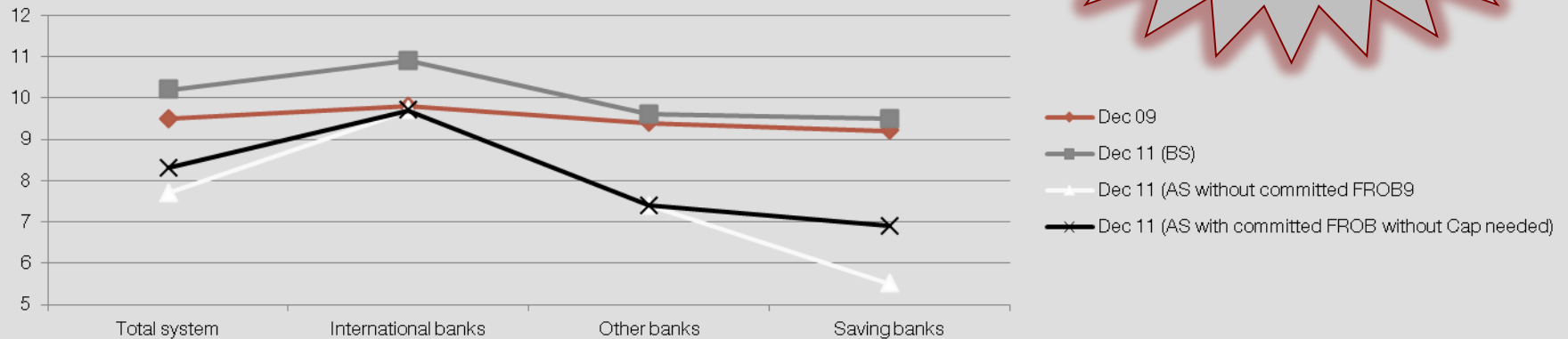
# ASSESSMENT

- **Spanish banking system remains solvent**

Benchmark scenario: Tier 1 ratio **10.2%**

Adverse scenario: Tier 1 ratio **8.3%**

Additional capital needed to reach Tier1 **6% +0.1%**



- **Stress test of European banks**

Not a forecast scenario

Asses ability and resilience to absorb shocks

# ASSESSMENT



Nº	Group	% assets/total system		Capital needed
		indiv	acum	
1	0049-GRUPO SANTANDER	32,2	32,2	
2	0182-GRUPO BBVA	15,4	47,6	
3	5200 JÚPITER	9,9	57,5	
4	5201 CAIXA	7,9	65,4	
5	5196 BASE	3,9	69,3	
6	0075-BANCO POPULAR ESPAÑOL, S.A.	3,8	73,1	
7	0081-BANCO DE SABADELL, S.A.	2,4	75,5	
8	5101 DIADA	2,3	77,8	1.032
9	5086 BREOGÁN	2,3	80,1	
10	5173 MARE NOSTRUM	2,1	82,2	
11	0128-BANKINTER, S.A.	1,6	83,8	
12	5051 ESPIGA	1,4	85,2	127
13	5139 BANCA CÍVICA	1,4	86,6	406
14	2085-CAJA DE AHORROS Y M.P. DE ZARAGOZA, ARAGON Y RIOJA	1,3	87,9	
15	5150 UNICAJA	1,0	88,9	
16	0072-BANCO PASTOR, S.A.	0,9	89,8	
17	5151 CAJASOL	0,9	90,7	
18	2095-BILBAO BIZKAIA KUTXA,AURREZKI KUTXA ETA BAHITETXEA (BBK)	0,9	91,6	
19	5052 UNNIM	0,8	92,4	270
20	2101-CAJA DE AHORROS Y M.P. DE GIPUZKOA Y SAN SEBASTIAN (KUTXA)	0,6	93,0	
21	5202 CAJA3	0,6	93,6	
22	2024-CAJA DE AHORROS Y M.P. DE CORDOBA (CAJASUR)	0,5	94,1	
23	0061-BANCA MARCH, S.A.	0,4	94,5	
24	0042-BANCO GUIPUZCOANO, S.A.	0,3	94,8	
25	2097-CAJA DE AHORROS DE VITORIA Y ALAVA (VITAL)	0,3	95,1	
26	2045-CAJA DE AHORROS Y M.P. DE ONTINYENT	0,0	95,1	
27	2056-COLONIA - CAIXA D'ESTALVIS DE POLLENÇA	0,0	95,2	

European  
minimum scope

Spanish  
wider scope

# CONTENT OF THE PRESENTATION



- **Results**
- **Assessment**
- **Conclusions**
- **Q&As**



- **The stress tests consider the capital needed in a highly stressed and unlikely scenario**
  - Assess the extent to which institutions are capable of withstanding a highly adverse macroeconomic scenario over a specific period of time. The scenario is not a projection, forecast or estimate of either the developments of the economy or institutions' results or capital

**Capital Needs** = Potential losses – Resources

- ¿Too much / too low?
  - *This will depend on the three determinants of the capital needs as well as on the capital target ratio for an adverse scenario situation (CEBS has establish Tier1 = 6%)*

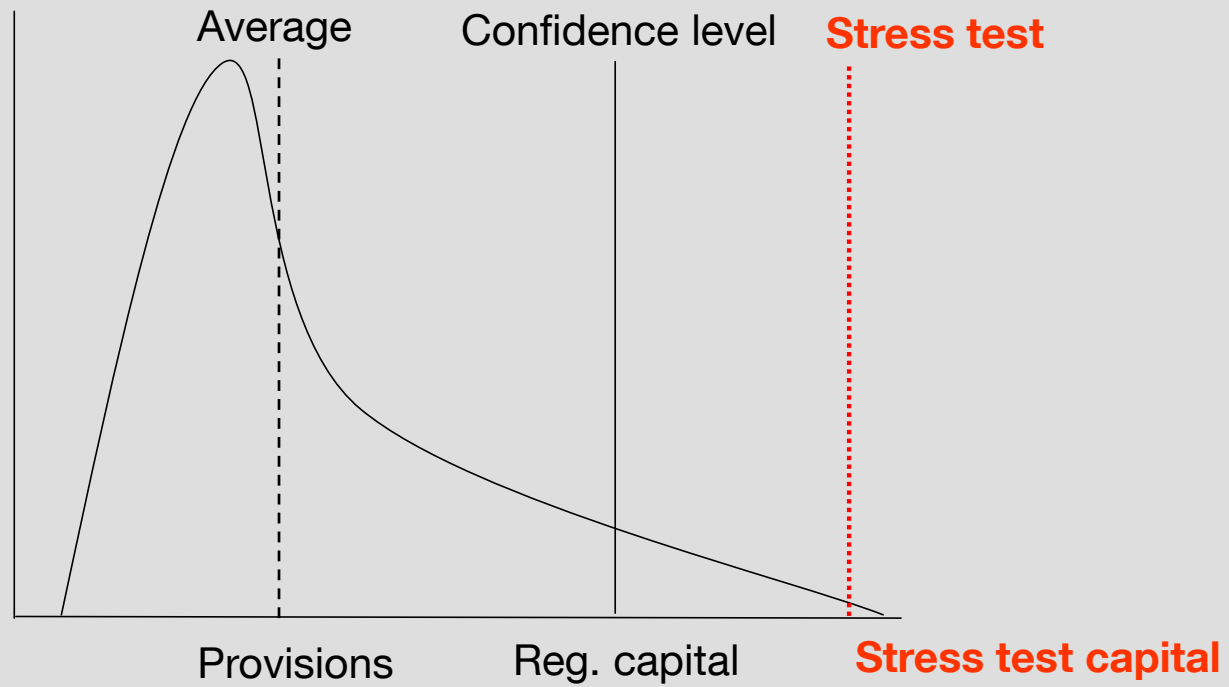


Capital Needs = Potential losses – Resources

- This is a supervisory stress test. There is a trade-off that supervisors have to deal with:
  - *The risk of not putting enough capital to ensure the soundness of the system*
  - *The risk of putting too much capital eroding interests of private stakeholders*
- And also taking into account a correct use of public sector resources



- **CEBS has defined a Tier1 capital ratio of 6% to be maintained in the adverse scenario**
  - This is 50% higher than the legally required minimum and, moreover, in a scenario that is very extreme and improbable relative to the one consider to calibrate the regulatory capital





- **CEBS has defined a Tier1 capital ratio of 6% to be maintained in the adverse scenario**
  - The sole precedent in this connection is the SCAP conducted by the US authorities, where they consider two benchmark capital ratios in the adverse scenario: Tier1 = 6% and Core Capital = 4%
  - In the case of the Spanish banks, and particular of savings banks, the distance between Tier1 and core capital is usually about 1.5 percentage points

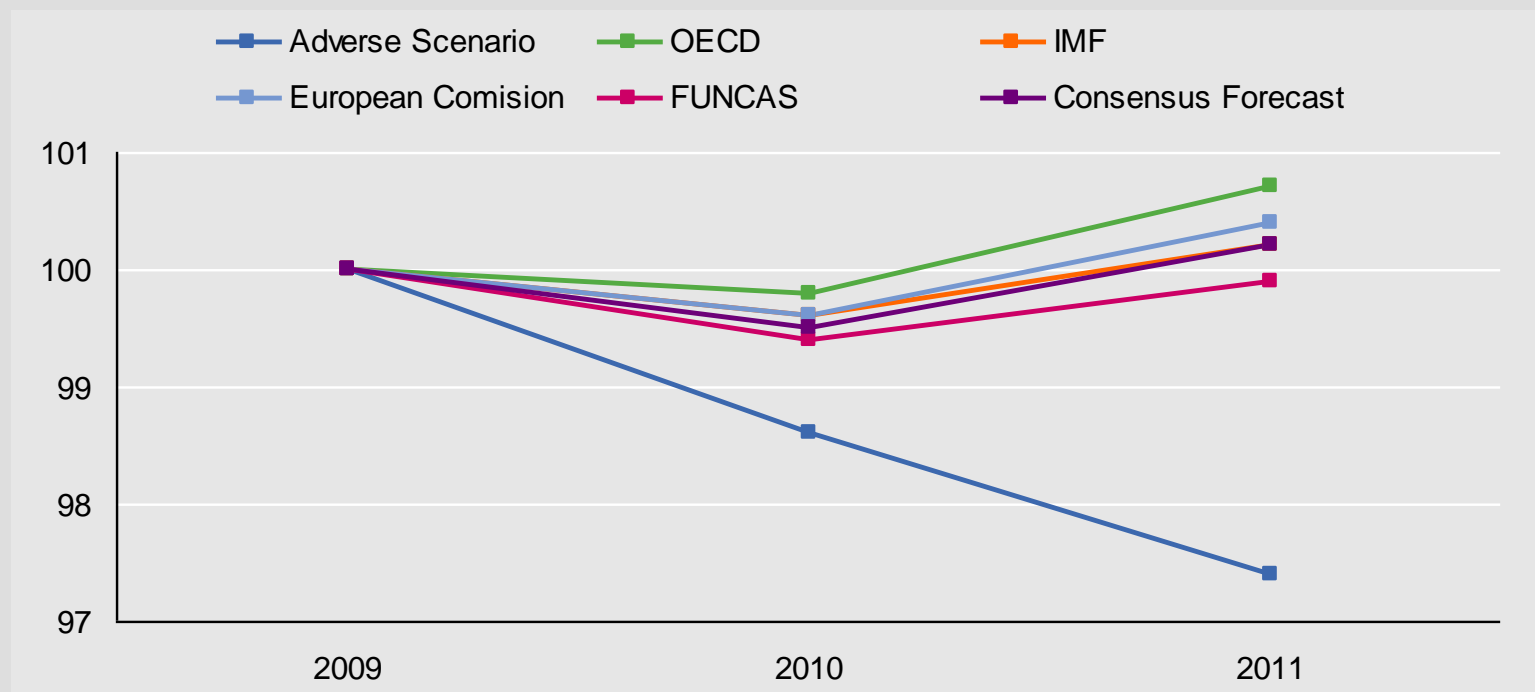


- **The adverse macroeconomic scenario is also defined by the European authorities. There are two scenarios**
  - **Benchmark scenario.**
    - *It is a more central scenario in the macroeconomic variables.*
    - *Having said that Banco de España has also stressed the parameters that determined the loss rates, as well as the income generation capacity of credit institutions. Thus, it is not a prediction of the possible future developments of credits institutions capital and results*
  - **Adverse scenario**
    - *It is the relevant scenario in terms of determining the impact of the stress test exercise*

# ASSESSMENT MACROECONOMIC SCENARIO



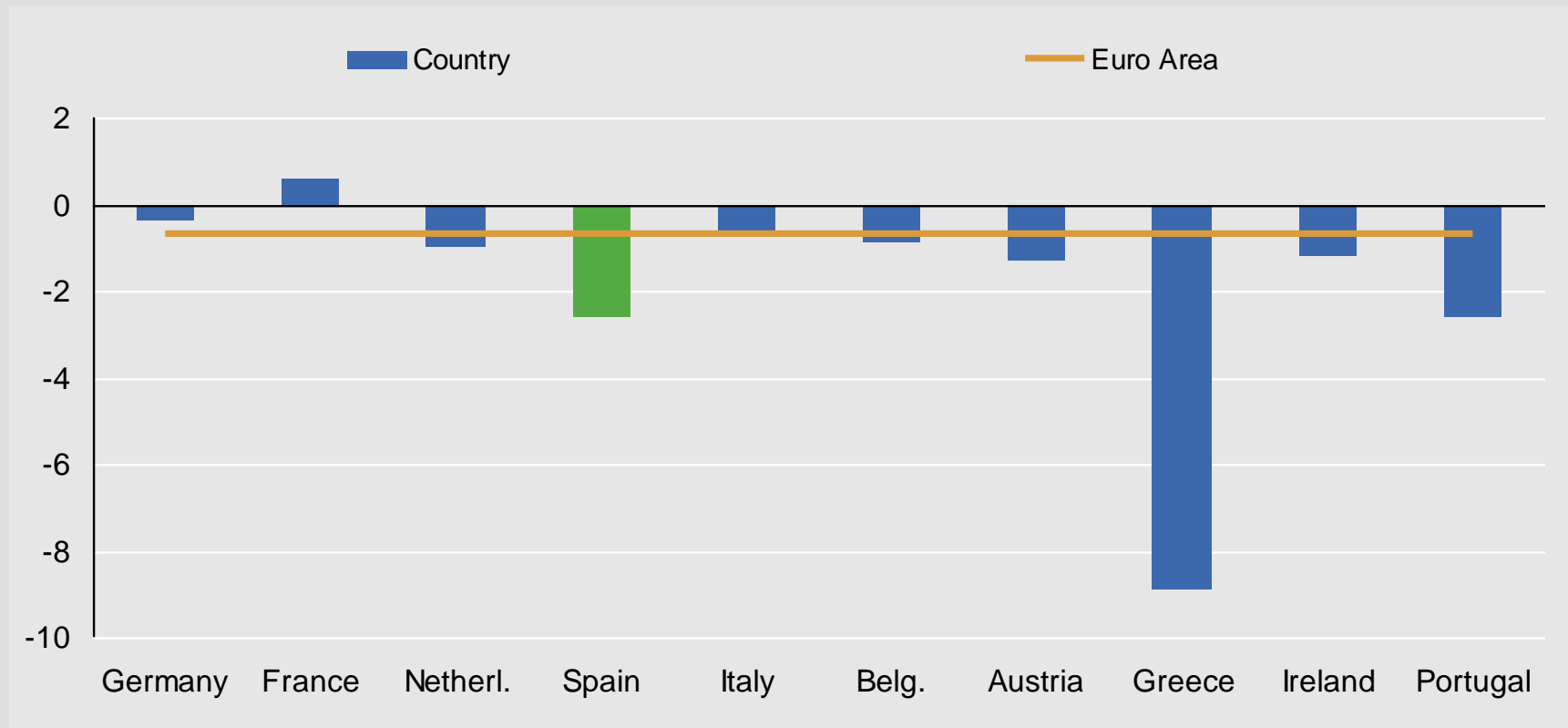
- **The adverse scenario incorporates a high degree of stress that translates a decline in GDP in 2010-2011 of 2.6 percentage points**
  - This is on top of the strong contraction in the Spanish economy in 2009 (-3.6%)
  - This fall in GDP is outside the current forecast ranges of the various national and international agencies and of other analysts



# ASSESSMENT MACROECONOMIC SCENARIO



- The macroeconomic scenario used in the stress test is specially harsh for Spain

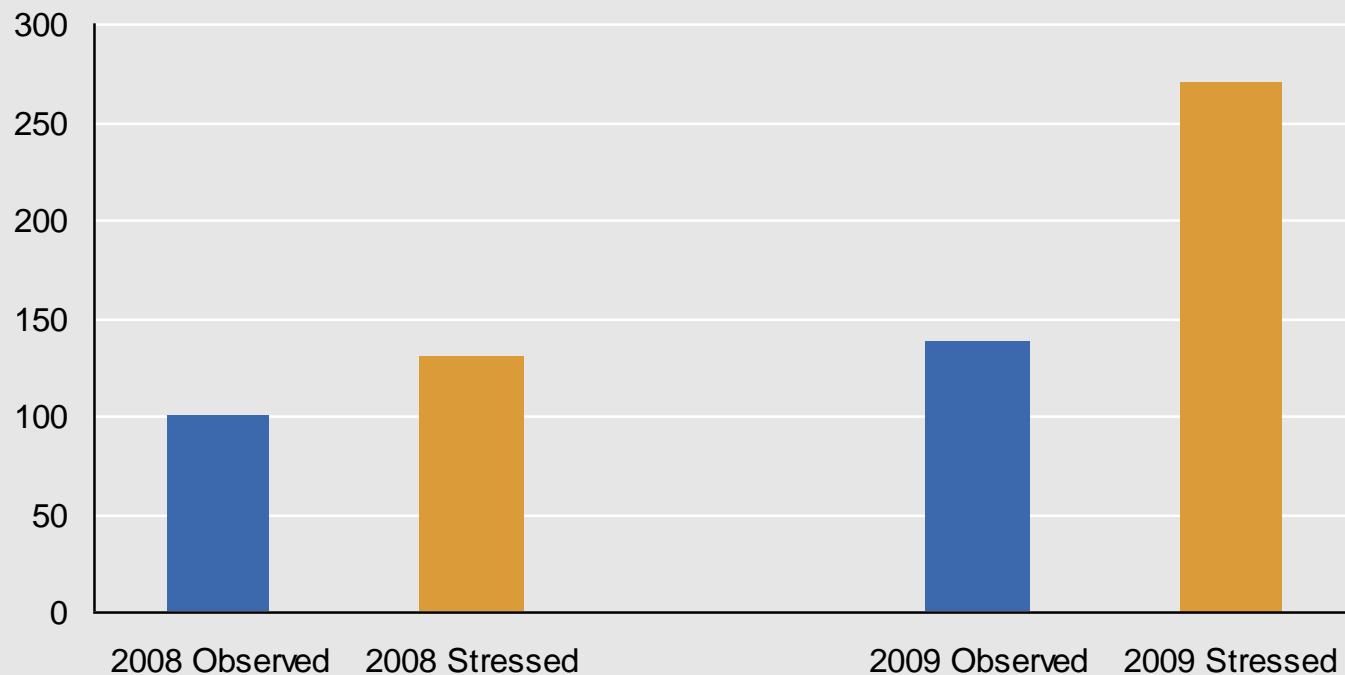


# ASSESSMENT BACKWARD STRESS TESTING



- **If we apply the stress test methodology taking 2007 as an starting point, obtaining the stressed PDs for the period 2008-2009, it is possible to compare these stressed PDs for 2008 and 2009 with the PDs actually observed in those years**

Probabilities of default (2008 Observed = 100)





- **CEBS/ECB have considered three shocks:**
  - Direct shock on the trading book: classical market risk type shock
  - Plus an additional haircut for the public debt on the trading book (i.e. long term interest rate increase of 70% since 2009)
    - *Equivalent to a decrease of 12% in Spanish 5 year bond*
  - Plus an indirect effect due to an increase in interest: additional increases in PD and LGD
    - *Impact: 6% of the total credit risk losses. The total effect of the sovereign shock is similar to the total mortgages losses*
  
- **It seems a complex computation... and it is ...**
  
- **... but the impact of sovereign risk is not an issue for the Spanish banking sector**
  - The impact of the shock is responsible for a 16% of total potential losses in 2010-2011 for the total system (19% for savings banks)



- **It is key to clearly distinguish two main credit portfolios related with the real estate sector**
  - Retail mortgages
  - Property developers

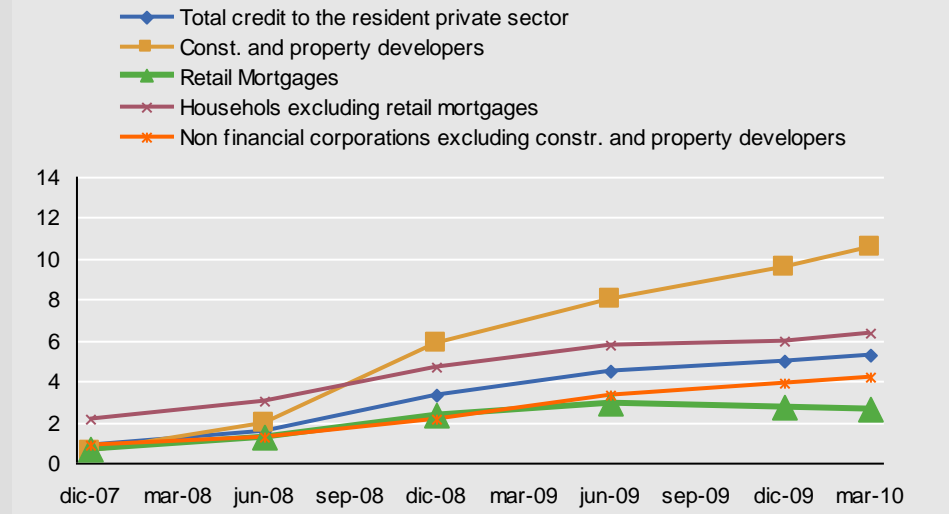
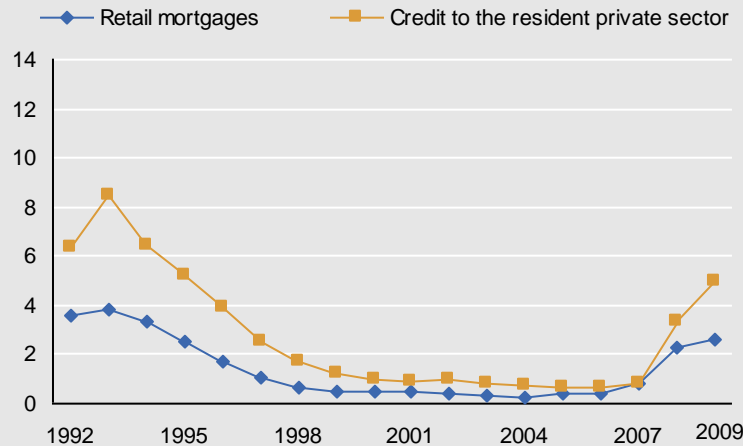
# ASSESSMENT

## REAL ESTATE SECTOR: RETAIL MORTGAGES



- Retail mortgages has not been an issue in the past, and at present they are not being an issue

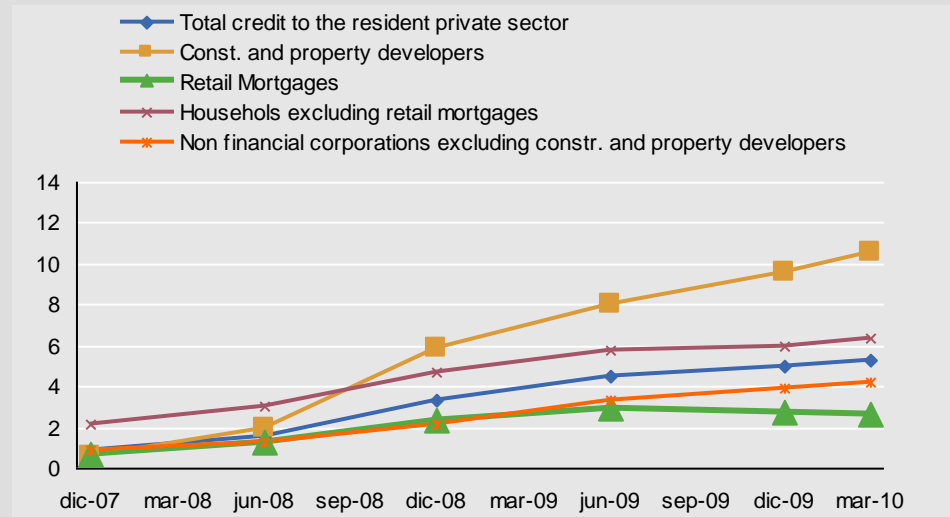
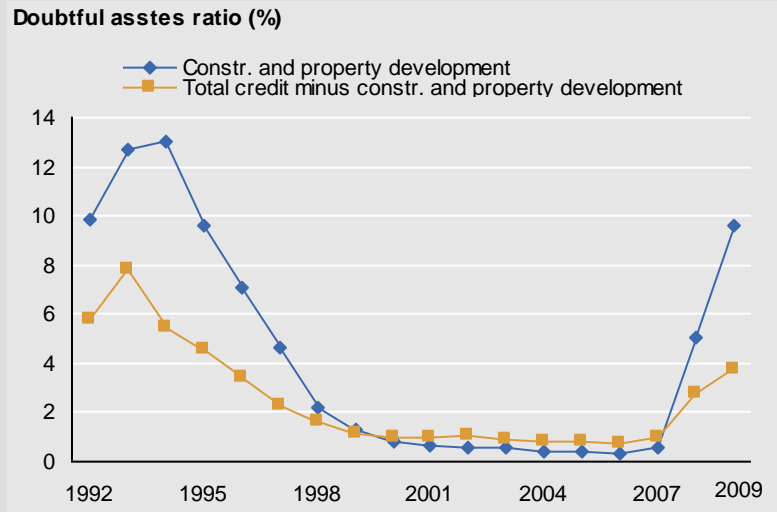
Doubtful asstes ratio (%)



- The average LTV of the retail mortgage portfolio is 62%
  - 81% of the retail mortgage portfolio has a LTV<80%
  - And only a 3.9% of that type of credit has a LTV>100%



- **The issue is credit to construction and property developers**
  - It has been an issue in the past and it is being an issue at present

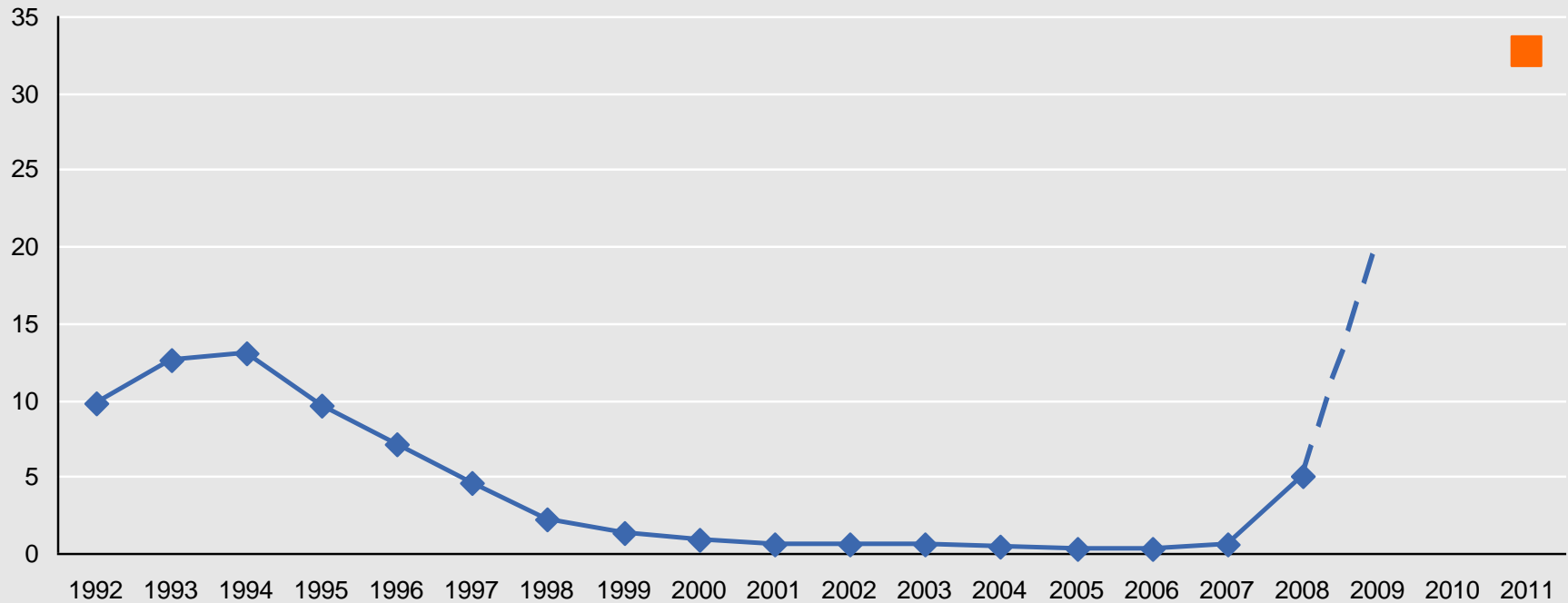




- For this reason the stress test on this sector implies severe conditions

Doubtful asstes ratio (%)

—◆— Constr. and property development  
■ Stress test on constr. and property developers. Including assets foreclousures



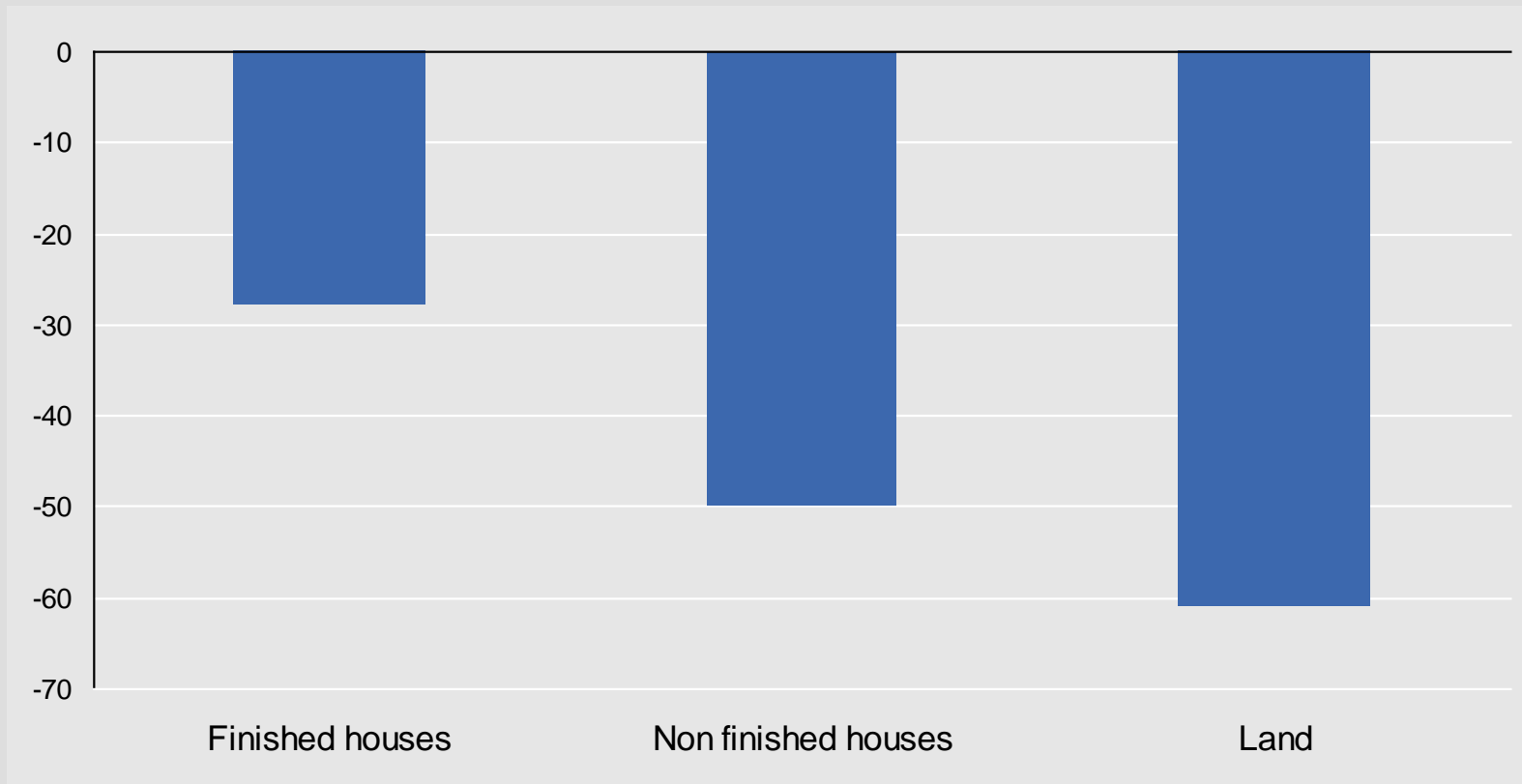


- The loss rate for the property developers portfolio in the adverse scenario is compatible with the following range of hypothetical PD / LGD
- For instance, a loss rate of the magnitude used in the stress test for property developers –around 17%- means assuming a PD = 45% and an LGD = 35%; or a PD = 30% and an LGD = 55%

		LGD		
		35	40	55
PD	30	11	12	17
	40	14	16	22
	45	16	18	25

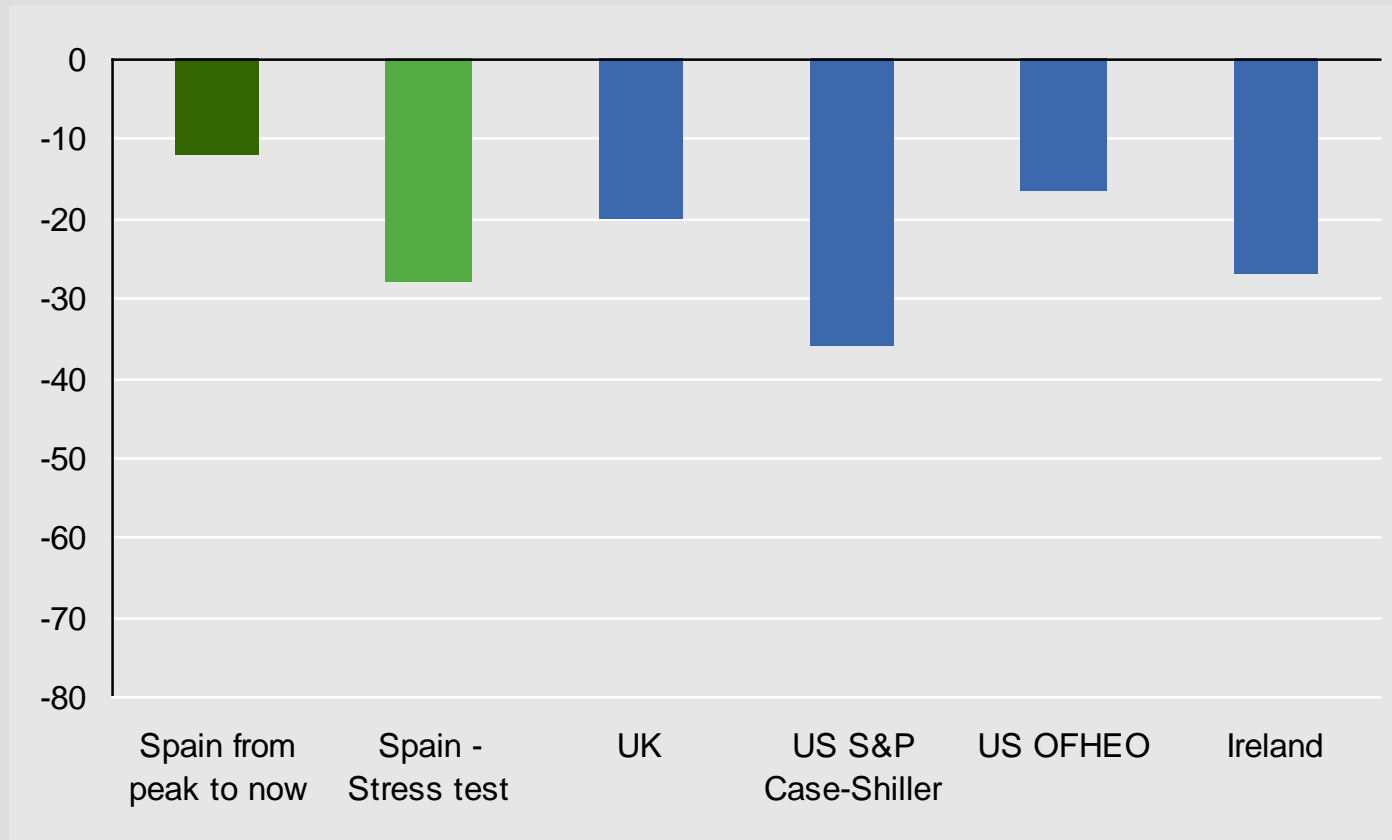


- **The adverse scenario is considering strong price declines in the collaterals of the loans to construction and property developers**





- House prices declines of 28% from their peak in nominal terms in the adverse scenario





- **The assumption regarding net operating income generation capacity in the adverse scenario in years 2010 and 2011 is very strong: -40% on average in the average net operating income for the period of the figure recorded in year 2009**
- This means that for the savings banks the NOI over total assets would be 37% lower than the average recorded over the last 20 years
  - *In the US SCAP this figure was 15% over the last 20 years*



- **Summing up, the stress scenario is extreme and improbable**
  - Macro variables: -2.6 percentage points in the accumulated GDP 2010-11
  - Finished house prices: -28% from their peak
  - Land and non finished houses: -61% and -50%
  - Conservative assumptions for the net operating income evolution

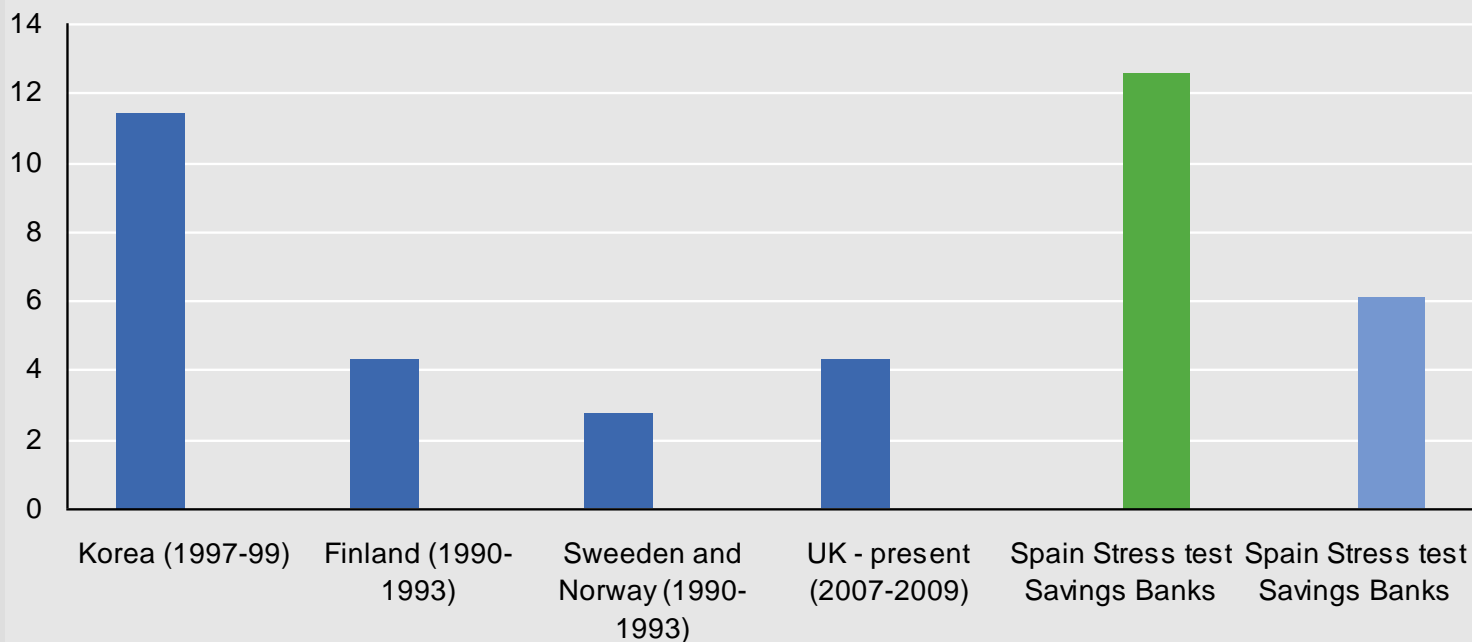
## WHAT DOES THE HARSHNESS OF THE ADVERSE SCENARIO COMPARES?

- A broader historical perspective shows that potential impairment as a percentage of risk-weighted assets for savings banks is higher than losses observed in other significant bank crises

### Losses as percentage of risk weighted assets

Spain. Green: potential losses; Light Blue: potential losses net of provisions and NOI

Other countries: incurred losses

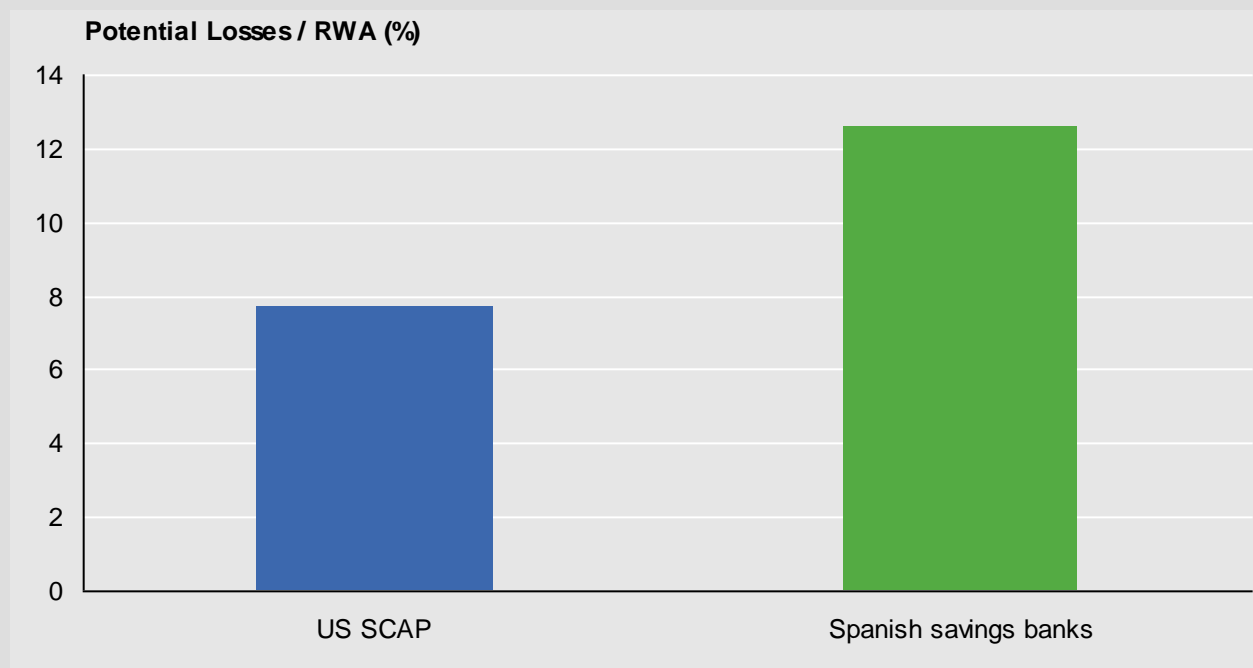


# ASSESSMENT

## WHAT DOES THE HARSHNESS OF THE ADVERSE SCENARIO COMPARES?



- **Comparisons with US SCAP should be done with due care**
  - Similarities (e.g. methodology, stressed macroeconomic scenario)
  - But also differences: (e.g. structural differences in the banking sector, different starting points for the exercise:
    - *in Spain in year 2009 GDP rate of change was -3.6%. The stress scenario is added that severe decline in GDP*



# ASSESSMENT

## WHAT DOES THE HARSHNESS OF THE ADVERSE SCENARIO COMPARES?



- **Comparisons with other theoretical exercises are more difficult**
  - Capital ratios used as benchmark are usually higher than the one used by CEBS
  - The starting point is different: most of them consider 2009 as an starting point, but others 2008
  - Time horizon also varies across the exercises, some are static, some consider a time period of two years and some others of three years

# ASSESSMENT

## WHAT DOES THE HARSHNESS OF THE ADVERSE SCENARIO COMPARES?



- Comparisons with other theoretical exercises are more difficult**
  - There are also important differences in the underlying assumptions, even regarding the simplest portfolios, such as residential mortgages. In some cases the stressed LGD for this portfolio implies huge house price reductions
  - For instance, some analyses considers LGD between 50% and 70% for the retail mortgage portfolio. Given the average LTV of the portfolio, this would imply a reduction in prices from 70% to 82%
  - Assuming less conservative LTV, the above mentioned LGDs would still imply huge price reductions

		Average LTV				
		50%	60%	70%	80%	100%
LGD	20%	60%	52%	44%	36%	20%
	45%	73%	67%	62%	56%	45%
	50%	75%	70%	65%	60%	50%
	70%	85%	82%	79%	76%	70%

# CONTENT OF THE PRESENTATION



- **Results**
- **Assessment**
- **Conclusions**
- **Q&As**



- **To conclude, two main reflections**
  - Banco de España has followed its general policy of transparency
    - *Coverage: basically the whole Spanish banking system*
    - *Detail: detailed information institution by institution*
  - In a stress test, potential capital needs are calculated as a “residual”. To arrive to that figure you need to assessed
    - *The amount of potential losses*
    - *The available and potential resources to absorb them*
    - *The benchmark capital ratio in the adverse scenario (Tier1=6% in the CEBS exercise)*

# CONTENT OF THE PRESENTATION



- **Results**
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THANK YOU

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